

APPENDIX N.1
APP CLOSURE AND POST-CLOSURE COSTS
(From Wood, 2022k)

STANDARDIZED RECLAMATION COST ESTIMATOR RESULTS

Closure Cost Estimate
Property Information

Enter Data Below in Green and Blue Spaces

STANDARDIZED RECLAMATION COST ESTIMATOR

Version 1.4.1

Build 017b (Revised 16 May 2019)

Approved for use in Nevada, August 1, 2012

COST DATA FILE INFORMATION	
File Name:	Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
Cost Data File:	SRCE_Cost_data-USR_1_12.xlsm
Cost Data Date:	April 15, 2022
Cost Data Basis:	User Data Data Cost Units: Imperial
Author/Source:	CDM Smith

PROJECT INFORMATION	
Property/Mine Name:	Rosemont Copper World Project Property Code:
Project Name:	Rosemont Copper World Conceptual Closure Plan
Date of Submittal:	July 20, 2022 Average Altitude: 4300 ft.
Select One:	<input type="radio"/> Notice or Sm Exploration Plan <input type="radio"/> Lg Exploration Plan <input checked="" type="radio"/> Mine Operation
Select One:	<input type="radio"/> Private Land <input checked="" type="radio"/> Public or Public/Private
Cost Estimate Type:	Surety
Cost Basis Category:	Southern Nevada - Adjusted for Arizona Clark, Esmeralda, Lincoln and Nye Counties - Adjusted for Pima County, AZ
Cost Basis Description:	

Closure Cost Estimate
Cost Summary
Project Name: Rosemont Copper World Conceptual Closure Plan
Project Date: July 20, 2022
Model Version: Version 1.4.1

File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
Data Cost File: SRCE_Cost_data-USR_1_12.xlsm
Cost Basis: Southern Nevada - Adjusted for Arizona

A. Earthwork/Recontouring				
	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$0	\$0	\$0	\$0
Well Abandonment	\$0	\$0	\$0	\$0
Pits	\$0	\$0	N/A	\$0
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings	\$0	\$0	\$0	\$0
Process Ponds	\$84,590	\$195,578	\$0	\$280,168
Heaps	\$549,724	\$1,364,406	\$5,850	\$1,919,980
Waste Rock Dumps	\$0	\$0	\$0	\$0
Landfills	\$0	\$0	\$0	\$0
Tailings	\$3,448,938	\$9,278,150	\$0	\$12,727,088
Foundation & Buildings Areas	\$0	\$0	\$0	\$0
Yards, Etc.	\$0	\$0	\$0	\$0
Drainage & Sediment Control	\$1,234,744	\$279,749	\$623,303	\$2,137,796
Generic Material Hauling	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal	\$5,317,996	\$11,117,883	\$629,153	\$17,065,032
Mob/Demob if included in Other User sheet	\$0	\$0	\$0	\$0
Mob/Demob	Rosemont RP21_APP_mob_demob_072022	\$201,254		\$201,254
Subtotal "A"	\$5,519,250	\$11,117,883	\$629,153	\$17,266,286
B. Revegetation/Stabilization				
	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$0	\$0	\$0	\$0
Well Abandonment				N/A
Pits	\$0	\$0	\$0	\$0
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings				N/A
Process Ponds	\$0	\$0	\$0	\$0
Heaps	\$0	\$0	\$0	\$0
Waste Rock Dumps	\$0	\$0	\$0	\$0
Landfills	\$0	\$0	\$0	\$0
Tailings	\$0	\$0	\$0	\$0
Foundation & Buildings Areas	\$0	\$0	\$0	\$0
Yards, Etc.	\$0	\$0	\$0	\$0
Drainage & Sediment Control	\$0	\$0	\$0	\$0
Generic Material Hauling	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal "B"	\$0	\$0	\$0	\$0
C. Detoxification/Water Treatment/Disposal of Wastes**				
	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Process Ponds/Sludge				\$0
Heaps				\$0
Dumps (Waste & Landfill)				\$0
Tailings				\$0
Surplus Water Disposal				\$0
Monitoring				\$0
Miscellaneous				\$0
Solid Waste - On Site	\$0	\$0	N/A	\$0
Solid Waste - Off Site				\$50,235
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**	Process Fluid Management	\$28,199,233	\$16,880,189	\$49,336,547
Subtotal "C"	\$28,199,233	\$16,880,189	\$4,257,125	\$49,386,782
D. Structure, Equipment and Facility Removal, and Misc.				
	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Foundation & Buildings Areas	\$0	\$0	\$0	\$0
Other Demolition	\$0	\$0	\$0	\$0
Equipment Removal	\$0	\$0	\$0	\$0
Fence Removal	\$0	\$0	\$0	\$0
Fence Installation	\$0	\$0	\$0	\$0
Culvert Removal	\$0	\$0	N/A	\$0
Pipe Removal	\$0	\$0	N/A	\$0

Closure Cost Estimate
Cost Summary
Project Name: Rosemont Copper World Conceptual Closure Plan
Project Date: July 20, 2022
Model Version: Version 1.4.1

File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm

Powerline Removal	\$0			\$0
Transformer Removal	\$0			\$0
Rip-rap, rock lining, gabions		\$0	\$0	\$0
Other Misc. Costs	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal "D"	\$0	\$0	\$0	\$0
E. Monitoring	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Reclamation Monitoring and Maintenance	\$493,551	\$1,049,058	\$70,113	\$1,612,722
Ground and Surface Water Monitoring	\$854,825	\$112,476	\$97,697	\$1,064,998
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Subtotal "E"	\$1,348,376	\$1,161,534	\$167,810	\$2,677,720
F. Construction Management & Support	Labor	Equipment ⁽²⁾	Materials	Total
Construction Management	\$572,506	\$111,832	N/A	\$684,338
Construction Support	\$0	\$47,791	\$0	\$47,791
Road Maintenance	\$309,982	\$665,614	\$19,879	\$995,475
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal "F"	\$882,488	\$825,237	\$19,879	\$1,727,604
Subtotal Operational & Maintenance Costs	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials ⁽³⁾	Total
Subtotal A through F	\$35,949,347	\$29,984,843	\$5,073,967	\$71,058,392

** Other Operator supplied costs - additional documentation required.

Indirect Costs		Include?	Total
1. Engineering, Design and Construction (ED&C) Plan (7)			\$2,842,336
2. Contingency (8)			\$2,842,336
3. Insurance (9)	\$539,240		\$539,240
4. Performance Bond (10)			\$2,131,752
5. Contractor Profit (11)			\$7,105,839
6. Contract Administration (12)			\$4,263,504
7. Government Indirect Cost (13)			\$895,336
Subtotal Add-On Costs			\$20,620,343
Total Indirect Costs as % of Direct Cost			29%
GRAND TOTAL			\$91,678,735

Administrative Cost Rates (%)					
Cost Ranges for Indirect Cost Percentages					
	<=	<=	<=	>	
1. Engineering, Design and Construction (ED&C) Plan (7)	\$1,000,000	\$25,000,000		\$25,000,000	Small Plan
Variable Rate	8%	6%		4%	0%
2. Contingency (8)	\$500,000	\$5,000,000	\$50,000,000	\$50,000,000	Small Plan
Variable Rate	10%	8%	6%	4%	0%
3. Insurance (9)	1.5% of labor costs				
4. Bond (10)	3.0% of the O&M costs if O&M costs are >\$100,000				
5. Contractor Profit (11)	10% of the O&M costs				
6. Contract Administration (12)	\$1,000,000	\$25,000,000		\$25,000,000	
Variable Rate	10%	8%		6%	
Government Indirect Cost (13)	21% of contract administration				

RECLAMATION COST ESTIMATION SUMMARY SHEET FOOTNOTES

NOTE :

1. Federal construction contracts require Davis-Bacon wage rates for contracts over \$2,000. Wage rate estimates may include base pay, payroll loading,
2. The reclamation cost estimate must include the estimated plugging cost of at least one drill hole for each active drill rig in the project area. Where the
3. Miscellaneous items should be itemized on accompanying worksheets.
4. Fluid management should be calculated only when mineral processing activities are involved. Fluid management represents the costs of maintaining proper
5. Handling of hazardous materials includes the cost of decontaminating, neutralizing, disposing, treating and/or isolating all hazardous materials used,
6. Any mitigation measures required in the Plan of Operations must be included in the reclamation cost estimate. Mitigation may include measures to avoid,
7. Engineering, design and construction (ED&C) plans are often necessary to provide details on the reclamation needed to contract for the required work. To
8. A contingency cost is included in the reclamation cost estimation to cover unforeseen cost elements. Calculate the contingency cost as a percentage of the
9. Insurance premiums are calculated at 1.5% of the total labor costs. Enter the premium amount if liability insurance is not included in the itemized unit costs.
10. Federal construction contracts exceeding \$100,000 require both a performance and a payment bond (Miller Act, 40 USC 270et seq.). Each bond premium is
11. For Federal construction contracts, use 10% of estimated O&M cost for the contractor's profit.
12. To estimate the contract administration cost, use 6 to 10% of the operational and maintenance (O&M) cost. Calculate the contract administration cost as a

Closure Cost Estimate Heap Leach

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
Date of Submittal: July 20, 2022
File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Heap Leach Pads - Cost Summary				
	Labor	Equipment	Materials	Totals
Drain Installation	\$1,155	\$810	\$5,850	\$7,815
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$548,569	\$1,363,596	N/A	\$1,912,165
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$548,724	\$1,364,406	\$5,850	\$1,919,980
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$548,724	\$1,364,406	\$5,850	\$1,919,980

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Heap Leach Pads - User Input		You must fill in ALL green cells and relevant blue cells in this section for each heap, lift or heap category																		
Facility Description				Physical (1) - MANDATORY									Cover				Growth Media			
Description (required)	ID Code	Type		Underlying Ground Slope % grade	Ungraded Slope -H-TV	Final Slope -H-TV	Final Top Slope % grade	Lift (heap) Height ft	Mid-Bench Length ft	Average Flat Area Long Dimension (ripping distance) ft	Final (Regraded) Heap Footprint acres	Regrade Volume (if calculated elsewhere) cy	Cover Thickness Slopes in	Cover Thickness Flat Areas in	Distance from Cover Borrow ft	Slope from Heap to Cover Borrow % grade	Slope Growth Media Thickness in	Flat Area Growth Media Thickness in	Distance from Growth Material Stockpile ft	Slope from Heap to Stockpile % grade
1 Rosemont Heap Leach Facility		Heap Leach		6.0	2.3	2.3	1.0	350	1000	1000	336.00	cy					18.0	18.0	5,000	6.0

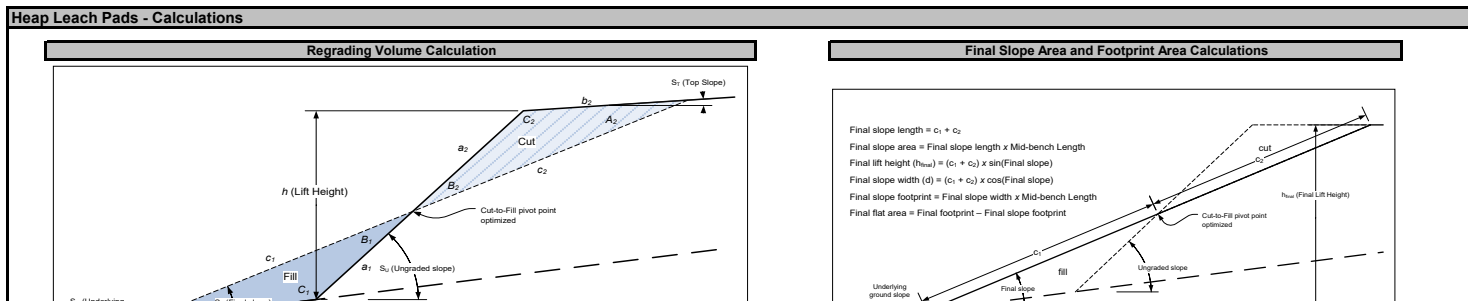
Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Heap Leach Pads - User Input (cont.)		You must fill in ALL green cells and relevant blue cells in this section for each heap, lift or heap category																
		Grading				Cover		Growth Media		Revegetation								
Description (required)		Regrading Material Condition (select)	Regrading Material Type (select)	Regrading Equipment Fleet (select)	Slope/ Side-by-Side (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Seed Mix Slopes (select)	Seed Mix Flat Areas (select)	Flat Slopes (select)	Mulch Flat Areas (select)	Fertilizer Slopes (select)	Fertilizer Flat Areas (select)	Slope Scarify/ Rip? (select)	Flat Area Scarify/ Rip? (select)	Scarifying/ Ripping Fleet (select)
1	Rosemont Heap Leach Facility	1	LS - broken	Large	No		Large Truck	Alluvium	Large Truck	None	None	None	None	None	None	No	No	Large Dozer

Notes:
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Heap Leach Pads - User Input (cont.)												
		Solution Collection Ditch Fill							Piping			
		Collection Ditch Length ft	Collection Ditch Top Width ft	Collection Ditch Depth ft	Volume (if calculated elsewhere) cy	Distance from Borrow ft	Slope Borrow % grade	Drain Rock Equipment Fleet (select)	Solid Pipe Length ft	Solid Pipe Type (select)	Drainage Pipe Length ft	Drainage Pipe Type (select)
1	Rosemont Heap Leach Facility								1000	6in (150 mm) HDPE		

Notes:



**Closure Cost Estimate
Heap Leach**

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Heap Leach Pads - Cost Summary				
	Labor	Equipment	Materials	Totals
Drain Installation	\$1,155	\$810	\$5,850	\$7,815
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$548,569	\$1,363,596	N/A	\$1,912,165
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$548,724	\$1,364,406	\$5,850	\$1,919,980
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$548,724	\$1,364,406	\$5,850	\$1,919,980



Figure 1 - Regrading Volume Calculation

Regrading Push Distance Calculation

dozing distance: based on 2/3 final cut slope + 2/3 final fill slope (minimum = 50 ft)

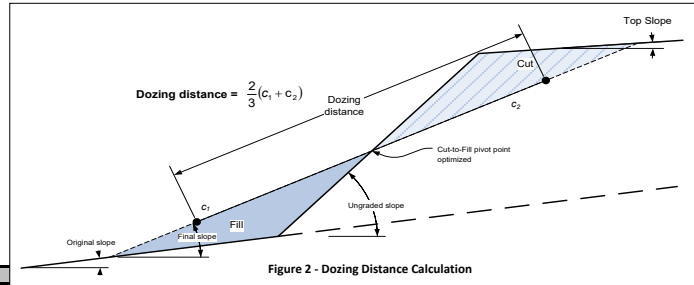


Figure 2 - Dozing Distance Calculation

Minimum 1 hr ripping/scarifying per area

Slopes:

Number of passes = Final slope length ÷ Grader width
Travel distance = Number of passes x Mid-bench length
Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)

Flat Areas:

Flat area width = Final flat area ÷ Average long dimensions
Number of passes = Flat area width ÷ Grader width
Travel distance = Number of passes x Average long dimensions
Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)

Revegetation: Minimum 1 acre revegetation crew time per area



Figure 3 - Final Slope Area and Footprint Area Calculation

Use when existing heap material is not suitable drain rock
Assume to be constructed in existing solution channels
Assume 2H:1V ditch sideslopes
Drain rock assumed to be Gravel - Dry at 2,550 lb/cy (1,510 kg/m3) from CAT Handbook 35th Ed.

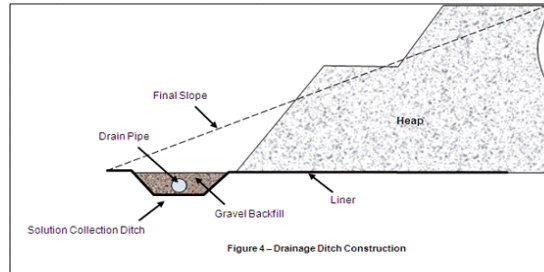


Figure 4 - Drainage Ditch Construction

Heap Leach Pad - Drainage Channel Fill & Drainage Pipe Installation

		Drain Rock Placement							Drainpipe Installation					
Description (required)		Drain Rock Volume cy	Drain Rock Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours hrs	Drainage Labor Cost \$	Drainage Equipment Cost \$	Total Drainage Cost \$	Piping Crew Hours hrs	Piping Labor Cost \$	Piping Equipment Cost \$	Piping Material Cost \$	Total Pipe Installation Cost \$
1 Rosemont Heap Leach Facility		0				0	\$0	\$0	\$0	3	\$1,155	\$810	\$5,850	\$7,815
							\$0	\$0	\$0	3	\$1,155	\$810	\$5,850	\$7,815

Heap Leach Pad - Regrading Costs

Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)

Description (required)	Regrading Volume cy	Dozing Distance (see above) ft	Regrading Fleet	Uncorrected Dozer Productivity cy/hr	Grade Correction	Dozing Material	Density Correction	Side-by-Side or Slot Dozing	Total Hourly Productivity cy/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1 Rosemont Heap Leach Facility	0		D10R								\$0	\$0	\$0
											\$0	\$0	\$0

Heap Leach Pad - Cover and Growth Media Costs

		Cover (lower layer)							Growth Media Placement					
Description (required)		Cover Volume cy	Cover Replacement Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Cover Labor Cost \$	Cover Equipment Cost \$	Total Cover Cost \$	Growth Media Volume cy	Growth Media Replacement Fleet	Fleet Productivity BCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours

Closure Cost Estimate
Heap Leach

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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Heap Leach Pads - Cost Summary				
	Labor	Equipment	Materials	Totals
Drain Installation	\$1,155	\$810	\$5,850	\$7,815
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$548,569	\$1,363,596	N/A	\$1,912,165
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$549,724	\$1,364,406	\$5,850	\$1,919,980
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$549,724	\$1,364,406	\$5,850	\$1,919,980

1	Rosemont Heap Leach Facility	0				\$0	\$0	\$0	817.176	769D/988G/D7R	677	4	1,207	\$548,569	\$1,363,596	\$1,912,165
						\$0	\$0	\$0	817.176				1,207	\$548,569	\$1,363,596	\$1,912,165

Heap Leach Pad - Scarifying/Revegetation Costs																
	Description (required)	Slope Area acres	Flat Area acres	Total Surface Area acres	Final Slope Length ft	Flat Area Long Dimension ft	Ripping/ Scarifying Fleet	Slope Scarifying/ Ripping Hours hrs	Flat Area Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Rosemont Heap Leach Facility	20.18	317.50	337.66	878		D10R			\$0	\$0	\$0	\$0	\$0	\$0	\$0
		20.18	317.50	337.66						\$0	\$0	\$0	\$0	\$0	\$0	\$0

1) Minimum total ripping hours = 1 (i.e. If total ripping hrs (slope + flat) < 1, then one hour of fleet time is assumed, regardless of acres shown in in scarifying table.)

Closure Cost Estimate
Tailings

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
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Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$170,012	\$690,463	N/A	\$860,475
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$3,276,926	\$8,587,687	N/A	\$11,864,613
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$3,448,938	\$9,278,150	\$0	\$12,727,088
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$3,448,938	\$9,278,150	\$0	\$12,727,088

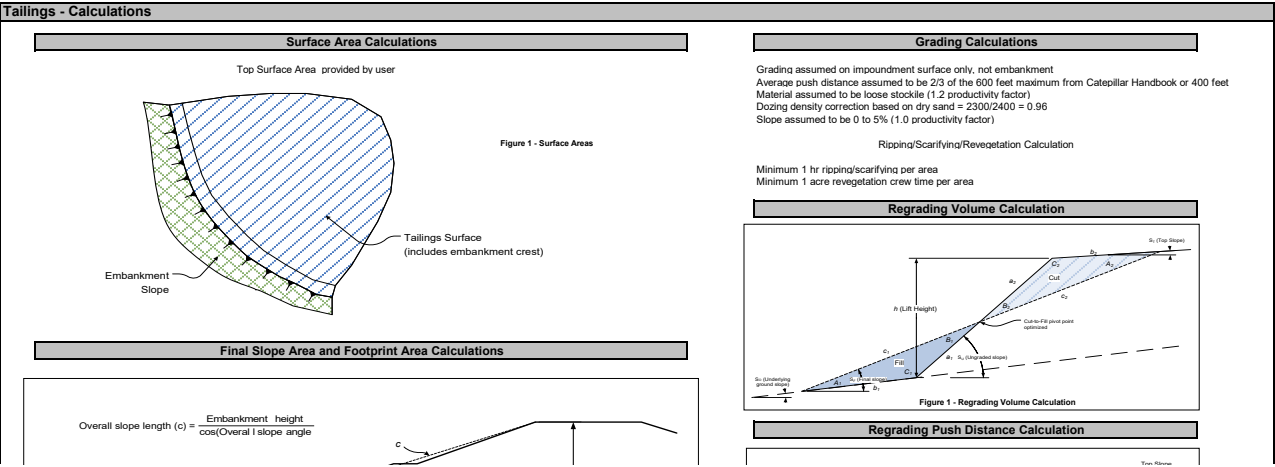
Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Tailings - User Input		You must fill in ALL green cells and relevant blue cells in this section for each tailings impoundment															
Facility Description		Physical - MANDATORY								Cover				Growth Media			
Description (required)	ID Code	Underlying Ground Slope % Grade	Ungraded Slope H:1V	Final (Regraded) Embankment Slope H:1V	Final Embankment Height ft	Final Tailings Surface Area acres	Mid-Embankment or Ripping Length ft	Embankment Regrade Volume (if calculated elsewhere) cy	Surface Regrade Volume (calculated elsewhere) cy	Embankment Cover Thickness in	Tailings Surface Cover Thickness in	Distance from Cover Borrow ft	Slope from Tailings to Borrow % grade	Embankment Growth Media Thickness in	Tailings Surface Growth Media Thickness in	Distance from Growth Material Stockpile ft	Slope from Tailings to Stockpile % grade
1 TSF - 1 Cell 1		9.1	2.5	2.5	390	383.70	3,000		215,586					18.0	18.0	10,000	9.1
2 TSF - 1 Cell 2		9.1	2.5	2.5	270	316.40	2,000		177,948					18.0	18.0	8,000	9.1
3 TSF - 1 Cell 3		9.1	2.5	2.5	240	245.90	1,500		106,721					18.0	18.0	8,000	9.1
4 TSF - 2 Cell 1		8.5	2.5	2.5	215	176.00	1,000		96,177					18.0	18.0	8,000	8.5
5 TSF - 2 Cell 2		8.5	2.5	2.5	262	131.00	1,000		73,443					18.0	18.0	8,000	8.5

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
Assumes cover material hauled from WRF or from immediately adjacent to TSF facilities
Assumes embankment constructed at final slope so no regrading required.
Assumes minor regrading of tailings surface (1 foot depth over 1/3 of tailings area) for drainage

Tailings - User Input (cont.)		You must fill in ALL green cells and relevant blue cells in this section for each tailings impoundment															
Description (required)		Grading				Cover		Growth Media		Revegetation							
		Regrading Material Condition (select)	Embankment Material Type (select)	Regrading Equipment Fleet (select)	Slot/Side-by-Side (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Seed Mix Embankment Slope (select)	Seed Mix Tailings Surface Slope (select)	Mulch Embankment Slopes (select)	Mulch Tailings Surface (select)	Fertilizer Embankment Slopes (select)	Fertilizer Tailings Surface (select)	Embankment Slope Scarify/ Rip? (select)	Tailings Surface Scarify/ Rip? (select)
1 TSF - 1 Cell 1		1.2	Tailings - Coarse	Large	No			Alluvium	Large Truck	None	None	None	None	None	None	No	No
2 TSF - 1 Cell 2		1.2	Tailings - Coarse	Large	No			Alluvium	Large Truck	None	None	None	None	None	None	No	No
3 TSF - 1 Cell 3		1.2	Tailings - Coarse	Large	No			Alluvium	Large Truck	None	None	None	None	None	None	No	No
4 TSF - 2 Cell 1		1.2	Tailings - Coarse	Large	No			Alluvium	Large Truck	None	None	None	None	None	None	No	No
5 TSF - 2 Cell 2		1.2	Tailings - Coarse	Large	No			Alluvium	Large Truck	None	None	None	None	None	None	No	No

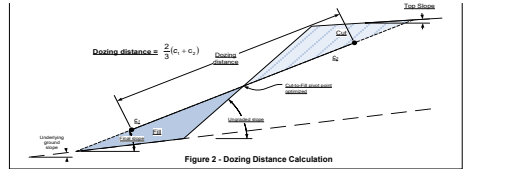
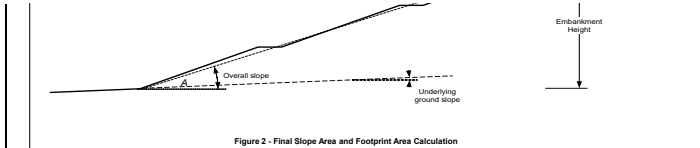
Notes:
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table



Closure Cost Estimate Tailings

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
Date of Submittal: July 20, 2022
File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$170,012	\$690,463	N/A	\$860,475
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$3,276,926	\$8,587,687	N/A	\$11,866,613
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$3,448,938	\$9,278,150	\$0	\$12,727,088
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$3,448,938	\$9,278,150	\$0	\$12,727,088



Tailings - Embankment Regrading Costs														
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)														
	Description (required)	Regrading Volume cy	Dozing Distance (see above) ft	Regrading Fleet	Uncorrected Dozer Productivity cy/hr	Grade Correction	Dozing Material Condition	Density Correction	Side-by-Side or Slot Dozing	Total Hourly Productivity cy/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	TSF - 1 Cell 1	0		D10R								\$0	\$0	\$0
2	TSF - 1 Cell 2	0		D10R								\$0	\$0	\$0
3	TSF - 1 Cell 3	0		D10R								\$0	\$0	\$0
4	TSF - 2 Cell 1	0		D10R								\$0	\$0	\$0
5	TSF - 2 Cell 2	0		D10R								\$0	\$0	\$0
												\$0	\$0	\$0

Tailings - Surface Regrading Costs														
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)														
	Description (required)	Regrading Volume cy	Dozing Distance (see above) ft	Regrading Fleet	Uncorrected Dozer Productivity cy/hr	Grade Correction	Density Correction	Dozing Material	Side-by-Side or Slot Dozing	Total Hourly Productivity cy/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	TSF - 1 Cell 1	215,586	400	D10R	501	1.00	0.96	1.20	1.00	359	601	\$54,553	\$221,553	\$276,106
2	TSF - 1 Cell 2	177,948	400	D10R	501	1.00	0.96	1.20	1.00	359	496	\$45,022	\$182,845	\$227,867
3	TSF - 1 Cell 3	108,721	400	D10R	501	1.00	0.96	1.20	1.00	359	303	\$27,503	\$111,698	\$139,201
4	TSF - 2 Cell 1	96,177	400	D10R	501	1.00	0.96	1.20	1.00	359	268	\$24,326	\$96,796	\$123,122
5	TSF - 2 Cell 2	73,443	400	D10R	501	1.00	0.96	1.20	1.00	359	205	\$18,608	\$75,071	\$94,179
		671,875									1,873	\$170,012	\$690,463	\$860,475

Tailings - Cover and Growth Media Costs																
Description (required)	Cover Placement							Growth Media Placement								
	Cover Placement Volume cy	Cover Fleet Fleet	Cover Trucks/ Productivity LCY/yr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Placement Cost \$	Growth Media Volume cy	Growth Media Placement Fleet Fleet	Growth Media Trucks/ Productivity LCY/yr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Growth Media Placement Cost \$
1 TSF - 1 Cell 1						\$0	\$0	\$0	\$0	769D/988G/DTR	747	9	1,423	\$1,133,619	\$2,382,451	\$4,160,000
2 TSF - 1 Cell 2						\$0	\$0	\$0	\$0	769D/988G/DTR	784	8	1,050	\$746,467	\$2,054,673	\$2,841,310
3 TSF - 1 Cell 3						\$0	\$0	\$0	\$0	769D/988G/DTR	784	8	828	\$602,958	\$1,575,402	\$2,178,310
4 TSF - 2 Cell 1						\$0	\$0	\$0	\$0	769D/988G/DTR	784	8	584	\$425,275	\$1,111,153	\$1,536,443
5 TSF - 2 Cell 2						\$0	\$0	\$0	\$0	769D/988G/DTR	784	8	454	\$330,607	\$863,908	\$1,194,443
						\$0	\$0	\$0	\$0				4,369	\$3,279,926	\$8,587,687	\$11,866,610

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
Date of Submittal: July 20, 2022
File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$13,259	\$30,883	N/A	\$44,142
Diversion Ditch Liner	\$0	\$0	\$0	\$0
Diversion Ditch Rip-Rap	\$1,214,857	\$226,896	\$623,303	\$2,064,956
Sed Pond Construct/Regrade	\$3,270	\$13,272	N/A	\$16,542
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$3,258	\$8,898	N/A	\$12,156
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$1,234,744	\$279,749	\$623,303	\$2,137,796
Diversion Ditch Revegetation	\$0	\$0	\$0	\$0
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$0	\$0	\$0	\$0
TOTALS	\$1,234,744	\$279,749	\$623,303	\$2,137,796

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Diversion Ditches - User Input																
			Diversion Ditches							Revegetation			Liner and Rip-Rap Installation			
	Description (required)	ID Code	Diversion Length ft.	Diversion Depth ft.	Ditch Bottom Width ft.	Ditch Sideslope Angle H:1V	Excavate Volume (if calculated elsewhere) cy	Excavating Material Condition (select)	Excavating Equipment Fleet (select)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Liner Area S.Y.	Liner Type (select)	Rip-Rap Area S.Y.	Rip-Rap Type (select type)
1	Stormwater Ditch - no riprap		44800	3.0	6.0	2.0		1	Large	None	None	None	0		0	
2	Stormwater Ditch - rip rap lined		11200	3.0	6.0	2.0		1	Large	None	None	None	0		24,142	Gabions, 12 in (30)
3	TSF1 Cell 1 Downchute		2500	3.0	7.0	3.0		1.2	Medium	None	None	None	0		1,950	Gabions, 36 in (14)
4	TSF1 Cell 2 Downchute		2500	3.0	7.0	3.0		1.2	Medium	None	None	None	0		1,950	Gabions, 36 in (14)
5	TSF1 Cell 3 Downchute		2500	3.0	7.0	3.0		1.2	Medium	None	None	None	0		1,950	Gabions, 36 in (14)
6	TSF2 Cell 1 Downchute		2000	3.0	7.0	3.0		1.2	Medium	None	None	None	0		1,560	Gabions, 36 in (14)
7	TSF2 Cell 2 Downchute		2000	3.0	7.0	3.0		1.2	Medium	None	None	None	0		1,560	Gabions, 36 in (14)

Notes:
Riprap assumes bottom and sides of ditch covered

Sediment/Evaporation Pond Construction/Removal - User Input													
			Sediment Ponds							Growth Media			
	Description (required)	ID Code	Pond Width ft.	Pond/Berm Length ft.	Berm Height ft.	Crest Width ft.	Sideslope Angle H:1V	Final Area (if calculated elsewhere) acres	Regrade Volume (if calculated elsewhere) cy	Cover Volume (if calculated elsewhere) cy	Growth Media Thickness in	Distance from Growth Media Stockpile ft.	Slope from Pond to Borrow % grade
1	Retention Pond 1		100	300	10.0	17.0	2.0				12	500	5.0
2	Retention Pond 2		100	300	10.0	17.0	2.0				12	500	5.0
3	Retention Pond 3		100	300	10.0	17.0	2.0				12	500	5.0
4	Retention Pond 4		100	300	10.0	17.0	2.0				12	500	5.0
5	Retention Pond 5		100	300	10.0	17.0	2.0				12	500	5.0
6	Retention Pond 6		100	300	10.0	17.0	2.0				12	500	5.0

Notes:
1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
3. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table
Berm dimensions assume all material removed for pond is used for berm construction

Sediment/Evaporation Pond Construction/Removal - User Input (cont.)													
			Sediment Ponds			Growth Media			Revegetation			Ripping/Scarifying	
	Description (required)	Excavating Material Condition	Material Type	Excavating Equipment Fleet	Liner Type	Growth Media Material Type	Growth Media Placement Equipment Fleet	Maximum Fleet Size (user override)	Seed Mix	Mulch	Fertilizer	Scarify/ Rip?	Scarify/ Ripping Fleet

Closure Cost Estimate Sediment & Drainage Control

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
Date of Submittal: July 20, 2022
File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$13,259	\$30,883	N/A	\$44,142
Diversion Ditch Liner	\$0	\$0	\$0	\$0
Diversion Ditch Rip-Rap	\$1,214,957	\$226,696	\$623,303	\$2,064,956
Sed Pond Construct/Regrade	\$3,270	\$13,272	N/A	\$16,542
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$3,258	\$8,898	N/A	\$12,156
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$1,234,744	\$279,749	\$623,303	\$2,137,796
Diversion Ditch Revegetation	\$0	\$0	\$0	\$0
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$0	\$0	\$0	\$0
TOTALS	\$1,234,744	\$279,749	\$623,303	\$2,137,796

		(select)	(select)	(select)	(select)	(select)	(select)		(select)	(select)	(select)	(select)	(select)
1	Retention Pond 1	1	Alluvium	Large	Alluvium	Scraper Dozer		None	None	None	No	Large Dozer	
2	Retention Pond 2	1	Alluvium	Large	Alluvium	Scraper Dozer		None	None	None	No	Large Dozer	
3	Retention Pond 3	1	Alluvium	Large	Alluvium	Scraper Dozer		None	None	None	No	Large Dozer	
4	Retention Pond 4	1	Alluvium	Large	Alluvium	Scraper Dozer		None	None	None	No	Large Dozer	
5	Retention Pond 5	1	Alluvium	Large	Alluvium	Scraper Dozer		None	None	None	No	Large Dozer	
6	Retention Pond 6	1	Alluvium	Large	Alluvium	Scraper Dozer		None	None	None	No	Large Dozer	

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Drainage Control - Calculations

Diversion Ditch Volume Calculation

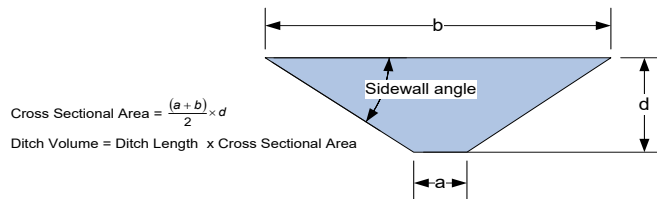


Figure 1 - Ditch Volume Calculation

- 1) Assume 20% swell for excavations
- 2) Assumes heavy duty trenching bucket is used

Sediment/Evaporation Pond Construction Calculation

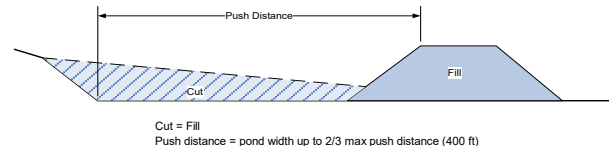


Figure 2 - Sediment Ponds

- 1) Assume balanced cut-to-fill for berm construction
- 2) Include cost for liner, if required.
- 3) Include line items for removal, if necessary.
- 4) Assume 20% swell for excavations
- 5) Minimum 1 hr ripping/scarifying per area
- 6) Minimum 1 acre revegetation crew time per area

Diversion Ditches - Excavation Costs

Diversion Ditches - Excavation Costs									Liner Installation				Rip-Rap Installation			
	Description (required)	Diversion Ditch Volume LCY	Diversion Ditch Equipment	Corrected Excavator Productivity LCY/hr	Total Hours	Diversion Ditch Labor Cost \$	Diversion Ditch Equipment Cost \$	Total Diversion Ditch Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Liner Cost \$	Labor Cost \$	Equipment Cost \$	Material Cost \$	Total Cost \$
1	Stormwater Ditch - no riprap	71,680	385BL	935	77	\$6,945	\$18,545	\$25,490	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	Stormwater Ditch - rip rap lined	17,920	385BL	935	19	\$1,714	\$4,576	\$6,290	\$0	\$0	\$0	\$0	\$623,834	\$116,365	\$345,233	\$1,085,432
3	TSF1 Cell 1 Downchute	5,333	345B	480	11	\$992	\$1,674	\$2,666	\$0	\$0	\$0	\$0	\$128,505	\$23,985	\$60,450	\$212,940
4	TSF1 Cell 2 Downchute	5,333	345B	480	11	\$992	\$1,674	\$2,666	\$0	\$0	\$0	\$0	\$128,505	\$23,985	\$60,450	\$212,940
5	TSF1 Cell 3 Downchute	5,333	345B	480	11	\$992	\$1,674	\$2,666	\$0	\$0	\$0	\$0	\$128,505	\$23,985	\$60,450	\$212,940
6	TSF2 Cell 1 Downchute	4,267	345B	480	9	\$812	\$1,370	\$2,182	\$0	\$0	\$0	\$0	\$102,804	\$19,188	\$48,360	\$170,352
7	TSF2 Cell 2 Downchute	4,267	345B	480	9	\$812	\$1,370	\$2,182	\$0	\$0	\$0	\$0	\$102,804	\$19,188	\$48,360	\$170,352
		114,133			147	\$13,259	\$30,883	\$44,142	\$0	\$0	\$0	\$0	\$1,214,957	\$226,696	\$623,303	\$2,064,956

Notes: LCM assumes 20% swell from ditch volume

Diversion Ditches - Revegetation Costs

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
Date of Submittal: July 20, 2022
File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$13,259	\$30,883	N/A	\$44,142
Diversion Ditch Liner	\$0	\$0	\$0	\$0
Diversion Ditch Rip-Rap	\$1,214,857	\$226,896	\$623,303	\$2,064,956
Sed Pond Construct/Regrade	\$3,270	\$13,272	N/A	\$16,542
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$3,258	\$8,898	N/A	\$12,156
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$1,234,744	\$279,749	\$623,303	\$2,137,796
Diversion Ditch Revegetation	\$0	\$0	\$0	\$0
Sediment Pond Revegetation	\$0	\$0	\$0	\$0
Subtotal Revegetation	\$0	\$0	\$0	\$0
TOTALS	\$1,234,744	\$279,749	\$623,303	\$2,137,796

	Description (required)	Surface Area acres	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Stormwater Ditch - no riprap	20.00	\$0	\$0	\$0	\$0
2	Stormwater Ditch - rip rap lined	5.00	\$0	\$0	\$0	\$0
3	TSF1 Cell 1 Downchute	1.50	\$0	\$0	\$0	\$0
4	TSF1 Cell 2 Downchute	1.50	\$0	\$0	\$0	\$0
5	TSF1 Cell 3 Downchute	1.50	\$0	\$0	\$0	\$0
6	TSF2 Cell 1 Downchute	1.20	\$0	\$0	\$0	\$0
7	TSF2 Cell 2 Downchute	1.20	\$0	\$0	\$0	\$0
		31.90	\$0	\$0	\$0	\$0

Sediment/Evaporation Ponds - Construction/Regrading Costs																	
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83)											Earthwork			Liner			
	Description (required)	Regrading Volume cy	Sed/Evap Pond Equipment	Dozing Distance (see above) ft	Uncorrected Dozer Productivity LCY/hr	Grade Correction	Density Correction	Excavating Material	Corrected Productivity LCY/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Constr/ Regrading Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Liner Cost \$
1	Retention Pond 1	4,933	D10R	100	1.627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
2	Retention Pond 2	4,933	D10R	100	1.627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
3	Retention Pond 3	4,933	D10R	100	1.627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
4	Retention Pond 4	4,933	D10R	100	1.627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
5	Retention Pond 5	4,933	D10R	100	1.627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
6	Retention Pond 6	4,933	D10R	100	1.627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
		29,598								36	\$3,270	\$13,272	\$16,542	\$0	\$0	\$0	\$0

Sediment/Evaporation Ponds - Growth Media Costs									
Growth Media									
	Description (required)	Growth Media Volume cy	Growth Media Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Placement Cost \$
1	Retention Pond 1	1,775	631G/D10R/D7R	802	1	2	\$543	\$1,483	\$2,026
2	Retention Pond 2	1,775		802	1	2	\$543	\$1,483	\$2,026
3	Retention Pond 3	1,775		802	1	2	\$543	\$1,483	\$2,026
4	Retention Pond 4	1,775	631G/D10R/D7R	802	1	2	\$543	\$1,483	\$2,026
5	Retention Pond 5	1,775	631G/D10R/D7R	802	1	2	\$543	\$1,483	\$2,026
6	Retention Pond 6	1,775	631G/D10R/D7R	802	1	2	\$543	\$1,483	\$2,026
		10,650				12	\$3,258	\$8,898	\$12,156

Sediment/Evaporation Ponds - Revegetation Costs												
	Description (required)	Surface Area acres	Long Ripping Distance ft	Ripping/ Scarifying Fleet	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Retention Pond 1	1.10	300	D10R		\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	Retention Pond 2	1.10	300	D10R		\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Retention Pond 3	1.10	300	D10R		\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	Retention Pond 4	1.10	300	D10R		\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	Retention Pond 5	1.10	300	D10R		\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	Retention Pond 6	1.10	300	D10R		\$0	\$0	\$0	\$0	\$0	\$0	\$0
		6.60			0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Closure Cost Estimate Process Ponds

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
 Date of Submittal: July 20, 2022
 File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$59,089	\$177,586	N/A	\$236,675
Growth Media Placement Costs	\$3,773	\$9,080	N/A	\$12,853
Liner Cutting & Folding Costs	\$21,728	\$8,912	N/A	\$30,640
Subtotal Earthworks	\$84,590	\$195,578	\$0	\$280,168
Revegetation Costs	\$0	\$0	\$0	\$0
TOTALS	\$84,590	\$195,578	\$0	\$280,168

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Process Ponds - User Input You must fill in ALL green cells and relevant blue cells in this section for each pond														
Facility Description			Pond Dimensions (1)					Backfill - (If trucks are used) (1)				Growth Media		
	Description (required)	ID Code	Pond Length ft	Pond Width ft	Pond Depth ft	Pond Sideslope Angle H:1V	Disturbed Area (if calculated elsewhere) acres	Percent Backfill (100% if blank)	Distance from Backfill Borrow ft	Slope from Facility to Borrow Area % grade	Pond Volume (if calculated elsewhere) cy	Growth Media Thickness in	Distance from Growth Media Stockpile ft	Slope from Facility to Stockpile % grade
1	Reclaim Pond		300	200	20.0	3.0		100%	500	8%		6	7,000	8%
2	Raffinate Pond		300	200	20.0	3.0		100%	500	8%		6	7,000	8%
3	Process Area Stormwater Pond		300	200	20.0	3.0		100%	500	8%		6	7,000	8%
4	Primary Settling Pond		500	400	20.0	3.0		40%	500	8%		0		
5	Pregnant Solution Pond		300	200	20.0	3.0		40%	500	8%		0		
6	HLF North Stormwater Pond		300	200	20.0	3.0		40%	500	8%		0		
7	HLF South Stormwater Pond		300	200	20.0	3.0		100%	500	8%		6	10,000	8%

Notes:

- All Physical parameters must be input even if manual overrides for volume or area are used.
- If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Process Ponds - User Input (cont.)											
		Liner	Backfill			Growth Media			Revegetation		
	Description (required)	Crew Cut & Fold Time ⁽²⁾ hrs	Backfill Material Type (select)	Backfill Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)
1	Reclaim Pond	24.0	Alluvium	Med Dozer		Alluvium	Med Truck		None	None	None
2	Raffinate Pond	24.0	Alluvium	Med Dozer		Alluvium	Med Truck		None	None	None
3	Process Area Stormwater Pond	24.0	Alluvium	Med Dozer		Alluvium	Med Truck		None	None	None
4	Primary Settling Pond		Gravel	Med Dozer					None	None	None
5	Pregnant Solution Pond		Gravel	Med Dozer					None	None	None
6	HLF North Stormwater Pond		Gravel	Med Dozer					None	None	None
7	HLF South Stormwater Pond	24.0	Alluvium	Med Dozer		Alluvium	Med Truck		None	None	None

Notes:

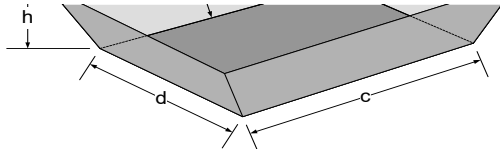
- Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table
- Pond liner removal crew (2Clab + excavator) = 2 General Laborers + 325C Excavator

Process Ponds - Calculations
<div style="text-align: center; border: 1px solid black; padding: 5px; margin-bottom: 10px;">Pond Volume Calculation</div>

**Closure Cost Estimate
Process Ponds**

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
Date of Submittal: July 20, 2022
File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$59,089	\$177,586	N/A	\$236,675
Growth Media Placement Costs	\$3,773	\$9,080	N/A	\$12,853
Liner Cutting & Folding Costs	\$21,728	\$8,912	N/A	\$30,640
Subtotal Earthworks	\$84,590	\$195,578	\$0	\$280,168
Revegetation Costs	\$0	\$0	\$0	\$0
TOTALS	\$84,590	\$195,578	\$0	\$280,168



Area and Volume of the Frustum of a Pyramid

$$\text{Surface Area} = ab + cd + (a+b+c+d) \times \frac{s}{2}$$

$$\text{Volume} = \frac{h(ab + cd + \sqrt{abcd})}{3}$$

Revegetation Calculations

Minimum 1 acre revegetation crew time per area

Process Ponds - Liner Cutting and Folding					
	Description (required)	Crew Hours hrs	Total Labor Cost \$	Total Equipment Cost \$	Total Liner Removal Cost \$
1	Reclaim Pond	24	\$5,432	\$2,228	\$7,660
2	Raffinate Pond	24	\$5,432	\$2,228	\$7,660
3	Process Area Stormwater Pond	24	\$5,432	\$2,228	\$7,660
4	Primary Settling Pond		\$0	\$0	\$0
5	Pregnant Solution Pond		\$0	\$0	\$0
6	HLF North Stormwater Pond		\$0	\$0	\$0
7	HLF South Stormwater Pond	24	\$5,432	\$2,228	\$7,660
		96	\$21,728	\$8,912	\$30,640

Process Ponds - Backfill and Growth Media Costs																	
Pond Backfill									Growth Media								
	Description (required)	Backfill Volume cy	Backfill Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours hrs	Total Labor Cost \$	Total Equipment Cost \$	Total Backfill Cost \$	Growth Media Volume cy	Growth Media Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Growth Media Cost \$
1	Reclaim Pond	25,628	D9R	300		85	\$7,715	\$23,187	\$30,902	1,111	740/988G/D8R	548	4	2	\$909	\$2,188	\$3,097
2	Raffinate Pond	25,628	D9R	300		85	\$7,715	\$23,187	\$30,902	1,111	740/988G/D8R	548	4	2	\$909	\$2,188	\$3,097
3	Process Area Stormwater Pond	25,628	D9R	300		85	\$7,715	\$23,187	\$30,902	1,111	740/988G/D8R	548	4	2	\$909	\$2,188	\$3,097
4	Primary Settling Pond	44,669	D9R	178		251	\$22,783	\$68,470	\$91,253						\$0	\$0	\$0
5	Pregnant Solution Pond	10,251	D9R	342		30	\$2,723	\$8,184	\$10,907						\$0	\$0	\$0
6	HLF North Stormwater Pond	10,251	D9R	342		30	\$2,723	\$8,184	\$10,907						\$0	\$0	\$0
7	HLF South Stormwater Pond	25,628	D9R	300		85	\$7,715	\$23,187	\$30,902	1,111	740/988G/D8R	560	5	2	\$1,046	\$2,516	\$3,562
		167,683				651	\$59,089	\$177,586	\$236,675	4,444				8	\$3,773	\$9,080	\$12,853

Process Ponds - Revegetation Costs					
	Description (required)	Surface Area acres	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Total Revegetation Cost \$
1	Reclaim Pond	1.40	\$0	\$0	\$0
2	Raffinate Pond	1.40	\$0	\$0	\$0

**Closure Cost Estimate
Process Ponds**

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$59,089	\$177,586	N/A	\$236,675
Growth Media Placement Costs	\$3,773	\$9,080	N/A	\$12,853
Liner Cutting & Folding Costs	\$21,728	\$8,912	N/A	\$30,640
Subtotal Earthworks	\$84,590	\$195,578	\$0	\$280,168
Revegetation Costs	\$0	\$0	\$0	\$0
TOTALS	\$84,590	\$195,578	\$0	\$280,168

3	Process Area Stormwater Pond	1.40	\$0	\$0	\$0	\$0
4	Primary Settling Pond	4.60	\$0	\$0	\$0	\$0
5	Pregnant Solution Pond	1.40	\$0	\$0	\$0	\$0
6	HLF North Stormwater Pond	1.40	\$0	\$0	\$0	\$0
7	HLF South Stormwater Pond	1.40	\$0	\$0	\$0	\$0
		13.00	\$0	\$0	\$0	\$0

**Closure Cost Estimate
Waste Disposal**

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
Date of Submittal: July 20, 2022
File Name: Copy of ROSEMONT Copper World SRCE_APP_Revised July 28 2022.xlsm
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$0	\$0	N/A	\$0
Solid Waste - Off Site				\$50,235
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$50,235

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

Waste Disposal - User Input - Solid Waste						Landfill (Bulk) Disposal			Dumpster
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity cy	Distance to Landfill ft	Slope to Landfill % grade	Number of Trucks (user override)	Months Dumpster Rental months
1	Solid Waste Removal		Waste Mgmt & Disposal	Dumpster	1,000				12

Notes:

1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Waste Disposal - User Input - Hazardous Materials									
	Description (required)	ID Code	Waste Type (select)	Container Type (select)	Vacuum Truck Size (select)	Liquid Quantity gallons	Solid Quantity cy	One Way Travel Distance to Disposal Site mi	One Way Travel Time to Disposal Site hr

Notes:

1. Use Other Demo & Equip Removal Sheet for tank removal

Waste Disposal - User Input - Hydrocarbon Contaminated Soils						
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity cy	Travel Distance to Offsite Disposal mi

Notes:

1. Use Yards or Landfills Sheets for bioremediation facility reclamation

Waste Disposal - Assumptions & Calculations			
<table><tr><th>Solid Waste Disposal</th></tr><tr><td>Off site disposal assumes use of average rolloff dumpster [30 cy (m3), 10 ton (tonne)] On site disposal assumes use of small loader/truck fleet for haulage Average density for on site disposal = 2,600 lb/cy (1,540 kg/m3) For on site disposal only 1 truck is required unless total truck hours > 8, only 2 trucks unless total truck hours are > 16</td></tr></table>		Solid Waste Disposal	Off site disposal assumes use of average rolloff dumpster [30 cy (m3), 10 ton (tonne)] On site disposal assumes use of small loader/truck fleet for haulage Average density for on site disposal = 2,600 lb/cy (1,540 kg/m3) For on site disposal only 1 truck is required unless total truck hours > 8, only 2 trucks unless total truck hours are > 16
Solid Waste Disposal			
Off site disposal assumes use of average rolloff dumpster [30 cy (m3), 10 ton (tonne)] On site disposal assumes use of small loader/truck fleet for haulage Average density for on site disposal = 2,600 lb/cy (1,540 kg/m3) For on site disposal only 1 truck is required unless total truck hours > 8, only 2 trucks unless total truck hours are > 16			

**Closure Cost Estimate
Waste Disposal**

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
 Date of Submittal: July 20, 2022
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 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$0	\$0	N/A	\$0
Solid Waste - Off Site				\$50,235
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$50,235

Hazardous Materials Disposal

Assumes all hazardous materials are known.
 Enter EITHER solid or liquid quantity each line.
 If container type = 55 gallon (200 liter) drum then solid waste hauling costs apply
 Average density for solids assumed to be 2,600 lb/cy (1,540 kg/m3)
 Vacuum truck sizes: small = 2,200 gal (~8,300 litres), large = 5,000 gal (~19,000 litres)
 Vacuum truck on site for 4 hours for each load

Hydrocarbon Contaminated Soils Disposal

Assumes all hazardous materials are known
 On site disposal assumes biopad treatment
 Excavation productivity =45 cy./hr (35 m3/hr) (Means Heavy Construction, 2006: 02315-424-0360)

Waste Disposal - Solid Waste Disposal

	Description (required)	Waste Volume cy	Number of Off Site Dumpster Loads	Landfill Fleet Equipment	Landfill Fleet Productivity LCY/hr	Number of Trucks	Total Fleet Hours	Total Dumpster Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Waste Disposal Cost \$
1	Solid Waste Removal	1,000	34					\$50,235	\$0	\$0	\$0
		1,000						\$50,235	\$0	\$0	\$0

Waste Disposal - Hazardous Materials Disposal

	Description (required)	Liquid Waste Volume gallons	Solid Waste Volume cy	Number of Truck Loads	Tons of Waste Tons	Pick-up Fees \$	Transport Fees \$	Disposal Fees \$	Total Hazardous Material Cost \$
						\$0	\$0	\$0	\$0

Waste Disposal - Hydrocarbon Contaminated Soils

	Description (required)	Quantity cy	Disposal Equipment Fleet	Total Fleet Hours	Treatment Cost \$	Transport Fees \$	Disposal Fees \$	Total Labor Cost \$	Total Equipment Cost \$	Total Waste Disposal Cost \$
					\$0	\$0	\$0	\$0	\$0	\$0

**Closure Cost Estimate
Monitoring**

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Reclamation Monitoring & Maintenance - Cost Summary				
	Labor	Equipment	Lab & Materials	Totals
Revegetation Maintenance	\$24,961	\$8,915	\$70,113	\$103,989
Erosion Maintenance	\$344,998	\$1,034,993	N/A	\$1,379,991
Reclamation Monitoring	\$123,592	\$5,150	N/A	\$128,742
Subtotal Reclamation Monitoring	\$493,551	\$1,049,058	\$70,113	\$1,612,722
Water Quality Monitoring	\$854,825	\$112,476	\$97,697	\$1,064,998
TOTAL MONITORING	\$1,348,376	\$1,161,534	\$167,810	\$2,677,720

Reclamation Maintenance								
Description	Total Revegetation Surface Area (1,2) acres	% Area Requiring Reseeding	Seed Mix (select)	Area Requiring Reseeding acres	Seed \$/acres	Labor \$/acres	Equipment \$/acres	Totals \$
Revegetation Maintenance	1,783	10%	Mix 4	178.3	\$393.25	\$140.00	\$50.00	
Labor								\$24,961
Equipment								\$8,915
Materials								\$70,113
Cost/Acre								\$583
							Subtotal	\$103,989
Notes: 1) Surface area is NOT the same as footprint disturbance area typically used for permitting purposes.								
	Total Volume Growth Media cy	% Volume Requiring Maintenance	Average Growth Media Placement Cost \$/CY	Volume Requiring Replacement cy		Labor (assume: 25%) \$/acres	Equipment (assume: 75%) \$/acres	Total \$
Erosion Maintenance	4,194,495	10%	\$3.29	419,450		\$344,998.00	\$1,034,993.00	\$1,379,991
Notes:								

Reclamation Monitoring					
Description	Hrs/Day	Days/Year	Number of Years	Rate \$/hr	
Field Work					
Field Geologist/Engineer	8	8	5	\$162.04	\$51,853
Range Scientist	8	8	5	\$146.94	\$47,021
Reporting					
Field Geologist/Engineer	4	4	5	\$162.04	\$12,963
Range Scientist	4	4	5	\$146.94	\$11,755
				Subtotal	\$123,692
Travel					
	Hrs/Trip hr	Trips/Year	Years	Truck Cost \$/hr	
Travel	4	8	5	\$32.19	\$5,150
				Subtotal	\$5,150
Total Reclamation Monitoring					\$128,742
Notes: Monitoring assumes 1 Field Geologist/Engineer and 1 Range scientist per trip, 4 trips per year, 2 days each trip Travel data assumes 1 trucks per trip, half day for travel each way, 4 trips per year					

Water and Rock Sample Analysis															
Description	Samples #	Events/Year	No. Years	First Sample Year closure year (1-100)	No. of Samplers	Days/Event	Hrs/Day	Analysis Cost \$/sample	Supplies \$/sample	Lab Cost \$	Material Cost \$	Equipment Cost \$	Labor Cost \$	Cost \$	Comments
Water Analysis (Profile I) (1)	9	4	3	1	9	3	10	\$411.00	\$6.51	\$44,388	\$703	\$49,338	\$394,535	\$488,964	

Closure Cost Estimate Monitoring

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
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Reclamation Monitoring & Maintenance - Cost Summary				
	Labor	Equipment	Lab & Materials	Totals
Revegetation Maintenance	\$24,961	\$8,915	\$70,113	\$103,989
Erosion Maintenance	\$334,998	\$1,034,993	N/A	\$1,379,991
Reclamation Monitoring	\$123,592	\$5,150	N/A	\$128,742
Subtotal Reclamation Monitoring	\$483,551	\$1,049,058	\$70,113	\$1,602,722
Water Quality Monitoring	\$854,825	\$112,476	\$97,697	\$1,064,998
TOTAL MONITORING	\$1,348,376	\$1,161,534	\$167,810	\$2,677,720

[illegible]

Notes: Sampling labor cost = No. Samplers x Years x Events/year x Days/event x Hour/Day x Labor Rate
Sampling equipment costs include 1 pickup truck for every two samplers

Ground & Surface Water Monitoring				
Pump Costs				
Description	No. of units	Replacement period (yrs.)	Years	Cost \$
Pump (purchased)	9		5	\$5,577
Subtotal Field Work				\$5,577
Notes: Replacement period = frequency of pump replacement				
Reporting				
Description	Hrs/Event	Rate \$/hr	Cost \$	
Field Geologist/Engineer				
Subtotal Reporting				
Notes: All sampling and reporting performed under APP permit				

Closure Cost Estimate Constr. Mgmt

Project Name: Rosemont Copper World Conceptual Closure Plan - Reclamation Plan
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 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Construction Management & Road Maintenance - Cost Summary				
	Labor	Equipment	Materials	Totals
Construction Management	\$572,506	\$111,832	N/A	\$684,338
Construction Support		\$47,791		\$47,791
Road Maintenance	\$309,982	\$665,614	\$19,879	\$995,475
TOTAL CONSTRUCTION MANAGEMENT	\$882,488	\$825,237	\$19,879	\$1,727,604

Construction Management							
Construction Management Staff							
Description	Duration mo.	Hours/ Month hr.	Number of Supervisors	Supervisor Rate \$/hr	Labor Cost \$	Equipment Cost ⁽¹⁾ \$	Totals \$
Active Reclamation	12	160	2	\$140.32	\$538,829	\$105,254	\$644,083
Monitoring & Maintenance	60	4	1	\$140.32	\$33,677	\$6,578	\$40,255
Total Staff					\$572,506	\$111,832	\$684,338
Construction Management Support							
Description	Duration mo.	Number of Units		Rental Rate \$/mo	Generator Cost \$/mo	Equipment Cost ⁽¹⁾ \$	Totals \$
Temporary Office Rental	12	1		\$198	\$2,714	\$34,939	\$34,939
Temporary Toilets	60	1		\$214		\$12,852	\$12,852
Total Support						\$47,791	\$47,791
Notes: Office rental assumes only 1 generator required for every 4 trailers							
Total Construction Management							\$732,129

Road Maintenance							
Description	Fleet Size (select)	Number	Duration mo.	Hours/ Month hr.	Labor Cost \$	Equipment Cost \$	Totals \$
Active Reclamation							
Water Truck	Large	1	12	160	\$131,386	\$256,051	\$387,437
Grader	Large	1	12	160	\$173,184	\$400,838	\$574,022
Monitoring & Maintenance							
Water Truck					\$0	\$0	\$0
Grader	Medium	1	60	1	\$5,412	\$8,725	\$14,137
Description	Gallons/ Day	Days/ Month	Duration mo.	Cost/ Gallon \$			Totals \$
Water Fees							
Water Fees	100000	22	12	0.00			\$19,879
Total Project Maintenance					\$309,982	\$665,614	\$995,475
Notes: 1) Supervisor equipment = pickup truck Final reclamation assumed completed in 12 months Periodic (once per year) road maintenance for 5 years Water cost assumes \$3/AF supply well cost plus \$243/AF pumping cost = \$0.000753/gal							

PROCESS FLUID COST ESTIMATOR RESULTS

**NEVADA STANDARDIZED
PROCESS FLUIDS COST ESTIMATOR
Heap Leach Pad and Tailings Storage Facility
INTERIM FLUID MANAGEMENT (IFM)
PROCESS FLUID STABILIZATION (PFS)
SUMMARY**

2021 Cost

Note: Use of this bond cost calculator is not required, but operators using these spreadsheets may realize a quicker preparation time as well as a faster agency approval time due to the standardization of costs and methodologies.

Company Name:	Rosemont Copper Company
Project Name:	Copper World Project
Submittal Date:	
WPCP Number(s):	

	Labor	Equipment	Materials	Total
<u>Interim Fluid Management</u>	\$994,054	\$249,918	\$394,153	\$1,638,124
<u>Process Fluid Stabilization</u>				
Phase I	\$789,552	\$167,147	\$77,947	\$1,034,646
Phase II	\$26,341,217	\$5,820,437	\$935,976	\$33,097,631
Phase III	\$74,410	\$24,974	\$1,102,644	\$1,202,028
<u>Total PFS (Phases I-III)</u>	\$27,205,179	\$6,012,558	\$2,116,567	\$35,334,304
<u>Evaporation</u>	N/A	\$10,617,713	\$1,746,405	\$12,364,118
Total PFS + Evaporation	\$27,205,179	\$16,630,271	\$3,862,972	\$47,698,423
Grand Total = IFM + PFS + Evaporation	\$28,199,233	\$16,880,189	\$4,257,125	\$49,336,547

USER INPUTS

7/28/2022

Heap Leach Pad (HLP) and Tailings Storage Facility (TSF) Interim Fluid Management (IFM) Process Fluid Stabilization (PFS)

green cells are for User Inputs on this page
yellow cells are from Unit Costs sheet

Company Name:	Rosemont Copper Company
Project Name:	Copper World Project
Facility-1 Name	Heap Leach Facility
Facility-2 Name	Tailings Storage Facility 1
Facility-3 Name	Tailings Storage Facility 2
Facility-4 Name*	
Submittal Date:	
WPCP No.(s)	

* If more than four facilities, enter in separate Process Fluids Cost Estimator.
Additional labor and support equipment may be required for larger sites having multiple facilities separated by considerable distances.

Recirculation				
Pumping systems must be consistent with approved WPCP				
Facility	Facility-1	Facility-2	Facility-3	Facility-4
Total volume recirculated (millions of gallons)	220	0	0	
Operational Pumping Rate (gpm)	2,500	1,100	550	
Static Head (feet) (1)	500	100	500	
Pressure Head (feet) (2)	525	125	525	
Friction Head (feet) (3)	125	25	125	0
Total Head (feet)	1,150	250	1,150	0
Pump Selection				
Pump # 1	Pump # 2	Pump # 3	Pump # 4	
Model Number	HH-225c	HH-150	HH-125c	HH-80c
B.E.P. Flow Rate @ given RPM (gpm) (4)	4,000	2,090	620	410
B.E.P. Head @ given RPM (feet)	260	260	340	320
RPM	1,900	2,000	2,200	2,200
Monthly Cycle (rental) Rate (24/7 operation)	\$ 4,484	\$ 3,364	\$ 2,906	\$ 1,566
Select # of pumps for each model for Facility-1 (5)	2	0	0	
Select # of pumps for each model for Facility-2	0	2	0	
Select # of pumps for each model for Facility-3	0	0	2	
Select # of pumps for each model for Facility-4				

Process Fluid Stabilization					
Time-frames to be determined by HLDE or other acceptable method. Provide supporting documentation.					
Facility	Facility-1	Facility-2	Facility-3	Facility-4	SITE
Phase I Duration (months) (6)	6	0	0		6
Phase II Duration (months) (7)	100	360	223		354
Phase III Duration (months)	1	1	1	1	1
ET Cell Conversion Cost*					
*Provide supporting documentation for estimated cost.	\$500,000	\$300,000	\$300,000		

Active Evaporation					
Facility	Facility-1	Facility-2	Facility-3	Facility-4	SITE
Total volume evaporated (millions of gallons) (8)	295.3	1875.0	223.0		2393.3
Static Head between pond and evaporator location (ft) (9)	500	100	500		
Number of 160 gpm Dual Pac evaporators used (10)	10	30	10		50
Average evaporation efficiency during months of operation	59%	59%	59%		

Sampling				
Per approved Water Pollution Control Permit(s) (WPCP)	weekly	monthly	quarterly	semi-annually
NDEP Profile I Water - # of samples analyzed:			12	
NDEP Profile II Water - # of samples analyzed:				

IFM Travel	
Select nearest town with hotel (11)	Fallon
	miles hours
Road miles from Carson City to hotel	62 1.25
Road miles from hotel to site	50 1.25

Hazardous Waste Disposal	
Enter total actual annual invoice(s) amount from last year.	\$0

Snow Removal	
Is snow plowing in winter necessary to manage the facility?	No

Site Map	
Is map included showing facilities and monitoring locations?	Yes

Final Plan for Permanent Closure (FPPC)	
Is FPPC on file and acceptable to regulatory agencies?	No

If answer is yes, include copy of the FPPC.	
Is Project in Clark, Esmeralda, Lincoln, or Nye County?	No

Phase I Site Supervision	
Is Site Supervisor for reclamation present during Phase I?	Yes

If answer is yes, include reference to page in document.	Under MLRP and APP permits
--	----------------------------

USER INPUTS

7/28/2022

Notes:

Recirculation pumps are rented (short time frame). Equipment for evaporation is purchased (longer time frame).

- (1) Static head is the difference in elevation between pumps and discharge point
- (2) Pressure head is the operating pressure necessary for irrigation system in place (emitters, impact sprinklers, wobblers, etc.).
For tailings storage facilities the pressure head may be zero.
- (3) Friction head is estimated as 25% of Static Head. If this value is not used,
provide calculations for friction head loss (i.e. Hazen-Williams equation and length of pipe).
- (4) B.E.P. = Best Efficiency Point for pump operation at given RPM.
- (5) Use B.E.P. to select pump(s) required to handle operational pumping rate at total head required.
Add pumps in series to get required head and in parallel to get required flow. Do not have more than two pumps in series.
- (6) Input number of months HLDE or other model shows recirculation is taking place.
Phase I duration for SITE will be selected from HLP or TSF with longest Phase I duration.
- (7) Input number of months HLDE or other model shows active evaporation is taking place.
Only include the actual number of months that evaporators are running.
Phase II duration for SITE will be selected from longest HLP or TSF Phase I + Phase II duration less SITE Phase I duration.
- (8) Include volume of supernatant pool if a tailings storage facility
- (9) Evaporators must have a minimum 500 foot clearance of approved containment for overspray.
This may require evaporator placement on heap leach pad and additional pumping power to overcome elevation head.
Provide site-specific details for placement of evaporators.
- (10) EcoMister Dual-Pac evaporators include 2, 40 hp motor evaporators and 1, 30 hp pump, dual unit pumps 160 gpm aloft.
- (11) IFM travel mileage is from Carson City, Nevada to town with hotel nearest to site.

APPENDIX N.2
ASMI RECLAMATION COSTS

Arizona Mined Land Reclamation Plan

Rosemont Copper World Project

May 5, 2022

(Revision 1 - minor updates to Page 5-5 on 9/7/2022)

Prepared by:

Rosemont Copper Company

and

CDM Smith



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Hudbayminerals.com

Table of Contents

Section 1 Introduction	1-1
1.1 Name, Address of Owner or Operator and Regulatory Contact - § R27-971, B.1	1-1
1.2 Certificate of Disclosure of Violations - § R27-905	1-1
Section 2 Regulatory Responsibility Statement - § R27-971, B.2.....	2-1
Section 3 Current Land Ownership and Use of Land - § R27-971, B.3.....	3-1
Section 4 Proposed Post-Mining Use of Land - § R27-971, B.4.....	4-1
Section 5 Description of the Mining Unit and Proposed Surface Disturbance Created - § R27-971, B.5	5-1
Section 6 Existing and Proposed Final Topography § R27-971, b.6	6-1
Section 7 Narrative Description of Proposed Roads § R27-971, B.7	7-1
Section 8 Acreage Affected by Each Type of Surface Disturbance with Map § R27-971, B.8	8-1
Section 9 Proposed Reclamation Measures to Achieve Post Mining Land Use § R27-971, B.9	9-1
9.1 Measures that will be taken to Restrict Public Access to the Project § R27-971, B.9a	9-1
9.2 Measures that will be taken to Address Erosion Control and Stability § R27-971, B.9b	9-2
9.3 Measures to Address Revegetation, Conservation, and the Care and Monitoring of Revegetated Areas § R27-971, B.9c	9-3
9.4 Measures That Will Be Taken to Encourage Fish and Wildlife Post-Mining Land Use and Their Compatibility with Fish and Wildlife Habitat on Adjacent Lands § R27-971, B.9d....	9-4
Section 10 A Proposed Schedule for Reclamation Measures § R27-971, B.10	10-1
Section 11 Estimated Costs to Perform Each of the Proposed Reclamation Measures § R27-971, B.11	11-1
Section 12 References.....	12-1

List of Figures

Figure 1 Vicinity Map
Figure 2 Utility Corridor
Figure 3 Proposed Project Facilities
Figure 4 Existing Topography
Figure 5 Proposed Topography
Figure 6 Proposed Project Plant

List of Tables

Table 1 Mined Land Reclamation Plan Requirements	iii
Table 2 Disturbance Acreages	8-1
Table 3 Reclamation Cost Summary under ASMIs MLRP Program.....	11-1

Appendices

Appendix A Reclamation Cost Estimates

Table 1 presents the requirements of the A.R.S. Title 27, Chapter 5, § R27-901 et seq., a description of the requirements, and the section within this Mined Land Reclamation Plan (MLRP) where these requirements are addressed.

Table 1 Mined Land Reclamation Plan Requirements

A.R.S. Section	Requirement	Section in Plan
R27-971, B.1.	Names, addresses of owner or operator and regulatory contact	1.1
R27-905	Certificate of Disclosure	1.2
R27-971, B.2.	Statement that owner or operator assumes responsibility for reclamation of surface disturbances	2
R27-971, B.3.	Current ownership and use of land in mining unit	3
R27-971, B.4.	Proposed post mining use of land	4
R27-971, B.5.	Description of mining unit and proposed surface disturbance	5
R27-971, B.6.	Existing topography	6 and Figure 4
R27-971, B.6.	Proposed final topography	6 and Figure 5
R27-971, B.7.	Narrative description of roads	7
R27-971, B.8.	Acreage affected by each type of surface disturbance and map of mining unit area showing each surface disturbance	8 and Table 2
R27-971, B.9.	Proposed reclamation measures to achieve the post-mining use	9
R27-971, B.9a.	Measures to restrict public access to pits, adits, shafts, and other surface features	9.1
R27-971, B.9b	Measures to address erosion control and stability	9.2
R27-971, B.9c	Measures to address revegetation, conservation and care and maintenance or revegetated areas	9.3
R27-971, B.9d.	Types of wildlife and fish to be encouraged	9.4
R27-971, B.10.	Proposed tentative schedule for beginning surface disturbances and beginning and completing the reclamation measures	10
R27-971, B.11.	Estimated cost to perform each of the proposed reclamation	11

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Section 1

Introduction

1.1 Name, Address of Owner or Operator and Regulatory Contact - § R27-971, B.1

Applicant

Rosemont Copper Company
5255 East Williams Circle, Suite 1065
Tucson, Arizona 85711
(520) 495-3500

Owner/Operator

Rosemont Copper Company
5255 East Williams Circle, Suite 1065
Tucson, Arizona 85711
(520) 495-3500

Regulatory Contact

Mr. David Krizek
Environmental Manager
5255 East Williams Circle, Suite 1065
Tucson, Arizona 85711
(520) 495-3527

1.2 Certificate of Disclosure of Violations - § R27-905

Rosemont Copper Company is not subject to the Certification of Disclosure requirements of A.R.S. Title 27, Chapter 5, § R27-905 because the Rosemont Copper Company is neither:

1. A person who is engaged in an activity subject to regulation under this chapter and who has been convicted of a felony involving laws related to mined land reclamation within the five-year period immediately preceding execution of the certificate.
2. A person who is engaged in an activity subject to regulation under this chapter and who is or has been subject in any civil proceeding to an injunction, decree, judgment or permanent order of any state or federal court within the five-year period immediately preceding the execution of the certificate that involved a violation of laws of that jurisdiction relating to mined land reclamation.


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Section 2

Regulatory Responsibility Statement - § R27-971, B.2

Rosemont Copper Company assumes responsibility for reclamation of surface disturbances that are attributable to the Rosemont Copper World Project (Project) consistent with Mining Unit Reclamation Plan elements identified in Arizona Revised Statutes §§ 27-901-997 and Arizona Administrative Code R11-2-201 through R11-2-822.

Name: Francisco Javier Del Rio

Signature: 

Title: Vice President South America & USA

Date: 05/05/2022

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Section 3

Current Land Ownership and Use of Land - § R27-971, B.3

The core of the Rosemont Copper Company land holdings in the general area of Rosemont's Copper World Project (Project) consists of 132 patented lode claims that total an area of nearly 2,004 acres. Additionally, there are also about 1,877 acres of fee (private) land, adjacent to, and generally south and west of the patented mining claims, that are part of the Project. The area covered by the patented claims and fee lands in the main operational Project area therefore totals approximately 3,881 acres. Rosemont also owns additional fee lands in the general Project area that are not part of the Project described herein (see attached **Figures 1 and 2**).

Rosemont has additional land holdings that are distal from the main Project area for infrastructure purposes such as well fields, a pump station, and electric power distribution. These lands, termed Sanrita West and Sanrita South (see attached **Figures 1 and 2**).

All private/patented land described above are held by Rosemont Copper Company, a subsidiary of Hudbay Minerals, Inc. (Hudbay).

Past and current land use reflects a mixture of mining activities, ranching, wildlife habitat, and limited recreational use. Access to most of the patented land is currently restricted to the public via gated roads.

The Rosemont property is also part of an existing Rosemont Ranch, a ranching facility with over 35,000 acres of grazing lands and leases.

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Section 4

Proposed Post-Mining Use of Land - § R27-971, B.4

The post-mining land use for the areas covered in this MLRP will include on-going ranching and wildlife habitat. Most of the post-mining reclaimed facilities will be ideal for grazing once vegetation is established. Public access restrictions to Rosemont's property are anticipated to remain in place post-mining.

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Section 5

Description of the Mining Unit and Proposed Surface Disturbance Created - § R27-971, B.5

In general, the Rosemont Copper World Project will include the following facilities:

- Open pit mines
- Waste Rock Storage Area
- Heap Leach Pad (HLP) and associated solution management facilities
- Tailings Storage Facilities (TSF) and associated dewatering facilities
- Processing facilities (grinding, milling, concentrate leach, solvent extraction, electrowinning)
- Mine Infrastructure Area (MIA) (truck maintenance, etc.)
- Ancillary facilities such as offices, warehouses, and storage yards
- Utilities (water and power)
- Haul Roads and miscellaneous plant site/service roads

The locations of the main Project facilities are illustrated on **Figures 2 through 5**. Details of the Plant Site are shown on **Figure 6**.

The main mine facilities and operations will be located within the following sections:

- T18S R15E: Sections 10, 13, 14, 15, 22, 23, 24, 25, 27 and 36
- T18S R16E: Sections 19, 30 and 31

Power and water utilities are located along a linear corridor shown on **Figures 1 and 2** within the following sections:

- T18S R15E, Sections 7, 17, 18, 20 and 21
- T18S, R14E, Sections 1, 2 and 12
- T17E, R14E, Sections 17, 18, 19, 20, 29, 32, 33, 34 and 35

Right-of-Ways (ROWs) have been established through State land with the Arizona State Land Department (ASLD) for these power and water utilities. Additionally, a license agreement has been established with the Town of Sahuarita (TOS) related to water utilities.

The production wells are located on private Rosemont land within the following sections and on the following parcels:

- Sanrita South: T17S, R14E, Section 29 (parcel 303-54-005B)
- Sanrita West: T17S, R14E, Section 17 (parcel 303-60-1410)

The Sanrita South parcel will also have a switchyard and is the start of the electrical transmission line through the State land ROW to the Rosemont Copper World Project property.

As a note, the disturbance areas attributed to the Utility Corridor and associated facilities on Sanrita West and Sanrita South is approximately 73 acres.

Open Pit Mines

The mine will consist of six open pit areas, Peach, Elgin, Heavy Weight, Copper World, Broadtop Butte, and Rosemont Pits for a total of approximately 858.7 million short tons of material mined. This equates to approximately 409.5 million cubic yards using an average density factor of about 155 pounds per cubic foot (lbs/cu ft).

The following total tonnages are anticipated from each of the pits:

- Peach: 31.6 million short tons (14.8 million cubic yards)
- Elgin: 16.9 million short tons (8.1 million cubic yards)
- Heavy Weight: 25.5 million short tons (12.2 million cubic yards)
- Copper World: 40.0 million short tons (19.1 million cubic yards)
- Broadtop Butte: 131.4 million short tons (63.5 million cubic yards)
- Rosemont: 613.3 million short tons (291.8 million cubic yards)

The Peach Pit will be constructed with 50-foot benches and overall pit slope angles of about 45 degrees. The pit bottom will be at an elevation of 3,950 feet above mean sea level (ft amsl). Pit crest elevations will range from 4,160 ft amsl to 4,680 ft amsl, creating a maximum depth of about 730 feet. The final pit will be irregular in shape with an overall length of about 2,900 feet and a width of about 1,500 feet.

The Elgin Pit will be constructed with 50-foot benches and overall pit slope angles of about 45 degrees. The pit bottom will be at an elevation of 4,050 ft amsl. Pit crest elevations will range from 4,250 ft amsl to 4,480 ft amsl, creating a maximum depth of about 430 feet. The final pit will be irregular in shape with an overall length of about 1,800 feet and a width of about 1,000 feet.

The Heavy Weight Pit will be constructed with 50-foot benches and overall pit slope angles of about 45 degrees. The pit bottom will be at an elevation of 4,150 ft amsl. Pit crest elevations will range from 4,500 ft amsl to 4,897 ft amsl, creating a maximum depth of about 747 feet. The final pit will be irregular in shape with an overall length of about 1,600 feet and a width of about 1,400 feet.

The Copper World Pit will be constructed with 50-foot benches and overall pit slope angles of about 45 degrees. The pit bottom will be at an elevation of 4,450 ft amsl. Pit crest elevations will range from 4,805 ft amsl to 5,180 ft amsl, creating a maximum depth of about 730 feet. The final pit will be irregular in shape with an overall length of about 2,700 feet and a width of about 1,000 feet.

The Broadtop Butte Pit will be constructed with 50-foot benches and overall pit slope angles of about 45 degrees. The pit bottom will be at an elevation of 5,000 ft amsl. Pit crest elevations will range from 5,400 ft amsl to 6,000 ft amsl, creating a maximum depth of 1,000 feet. The final pit will be irregular in shape with an overall length of about 5,500 feet and a width of about 2,000 feet.

The Rosemont Pit will be constructed with 50-foot and 100-foot benches and overall pit slope angles between 33 to 50 degrees. The pit bottom will be at an elevation of 3,850 ft amsl. Pit crest elevations will range from 5,100 ft amsl to 6,150 ft amsl, creating a maximum depth of about 2,300 feet. The final pit will be irregular in shape with an overall length of about 5,500 feet and a width of about 4,500 feet.

Mining operations will use typical large-scale equipment including mining shovels, haul trucks, and rotary blast hole drills.

At the cessation of operations, the Heavy Weight, Copper World, and Broadtop Butte pits will be backfilled with waste rock and reclaimed as part of the waste rock facility (WRF). The other pits will remain open (i.e., unreclaimed). These include the Peach, Elgin and Rosemont pits. A pit lake is anticipated to form in the Rosemont Pit as well as in the Peach and Elgin pits.

Waste Rock Facility Area

Waste rock will be placed in the main Waste Rock Facility (WRF) as shown on **Figures 3 through 5**. Additionally, waste rock will also be placed under the HLP as a base for the containment liner, a base for the plant site area/heap leach pond area, and other as needed platforms. Waste rock will also be used to construct haul roads or other access roads.

Waste rock placement is also planned along the eastern edge of the Rosemont Pit. This portion of the WRF is not indicated on the figures as it will be removed during operations as the pit is expanded.

The placement of waste rock will follow a waste rock management plan developed for the Rosemont Copper World Project as part an APP Program submission to ADEQ. The plan defines placement criteria for potentially acid generating (PAG) and acid-generating (AG) materials in order to prevent the formation of acid mine drainage. As a note, the majority of the materials mined from the pits is non-acid generating (NAG) material.

Waste rock mined from all six (6) open pits totals about 477 million tons. However, the main WRF can accommodate up to 528 million tons (313.25 million cubic yards) based on a density factor of about 125 lbs/cu ft. As noted, the Heavy Weight, Copper World, and Broadtop Butte pits will be filled with waste rock during operations. The following waste rock tonnages are attributable to each of the following pits:

- Peach: 1.42 million short tons of waste rock

- Elgin: 3.04 million short tons of waste rock
- Heavy Weight: 6.09 million short tons of waste rock
- Copper World: 13.30 million short tons waste rock
- Broadtop Butte: 43.10 million short tons waste rock
- Rosemont: 411.00 million short tons waste rock

Notwithstanding other areas where waste rock is placed, the main WRF covers approximately 725 acres from the Heavy Weight Pit area to the southern end of the Broadtop Butte area. The main WRF is divided into two (2) portions: the west portion and the east portion.

Waste rock in the main WRF is placed in 100-foot lifts. The overall slope angle will be 2.2: 1 (H:V). A 24-foot-wide bench will be placed every 100-foot lift. The inner bench angle will be about 1.4:1 (H:V). The top elevation of the west portion of the WRF will range from 5,300 ft amsl to 5,400 ft amsl with an overall maximum slope height will be about 900 feet. The top elevation of the east portion of the WRF will range from 5,600 ft amsl to 5,700 ft amsl with an overall maximum slope height will be about 400 feet.

Although the WRF is classified as a potentially discharging facility under ADEQ's APP Program, reclamation costs for the final WRF surface were attributable to ASMI in this MLRP.

Unlike the heap leach and tailings facilities, a growth media (soil) cover will not be placed on the final surface of the WRF. The surface will consist of coarse waste rock that is classified as NAG. Minor regrading of the top surfaces will occur to promote stormwater drainage off the facility. The surface of the WRF will be seeded with a native seed mix.

Heap Leach Pad and Associated Ponds

The Rosemont Copper World Project Heap Leach Facility (HLF) includes a Heap Leach Pad (HLP) and associated ponds. The HLP is located immediately south of the process plant area and will contain approximately 104 million tons of oxide ore material, or 62 million cubic yards at a density factor of about 125 lbs/cu ft.

Soil within the HLP footprint will be salvaged and stockpiled as a first step. Non-acid generating (NAG) waste rock will then initially be placed within the footprint of the HLP. The HLP liner containment system will be constructed on top of the waste rock fill. The pad area covers approximately 336 acres. Lined ponds associated with the Heap Leach Facility (HLF) cover approximately 10.4 acres and include a Pregnant Leach Solution (PLS) Pond, a Raffinate Pond, and two (2) stormwater ponds.

The maximum slope height of the heap will be about 430 feet, with a top elevation of approximately 4,830 ft and a toe elevation of 4,240 ft amsl. The heap will be constructed with 30-foot-wide benches for every 30-foot lift of material. The overall slope angle will be approximately 2.3:1 (H:V). Inner bench slopes angles will be about 1.4:1 (H:V). Both crushed and run-of-mine (ROM) oxide ore material may be placed on the HLP.

The heap and associated lined ponds are classified as discharging facilities and are therefore regulated under AQEQ's APP Program. Discharging facilities have the potential to affect groundwater resources. As such, closure activities associated with the elimination of discharge at closure from the heap leach and ponds are attributable to ADEQ and covered under ADEQ's APP Program. This includes the placement of a growth media (soil) cover on the heap surface. Although revegetation also contributes to discharge reduction through decreased infiltration of meteoric water into the heap, this cost component was included in this MLRP as well as the pond areas. Post-closure regrading of the heap surface (top and side slopes) is included under ADEQ's APP Program.

Details on the closure costs for the HLF are part of an APP Program submission to ADEQ for the Rosemont Copper World Project.

Tailings Storage Facilities

Two (2) tailings storage facilities will be constructed as part of the Rosemont Copper World Project: TSF-1 and TSF-2. Each tailings facility is a conventional impoundment, and each will have a raised embankment. Soil within the TSFs will be salvaged and stockpiled as a first step. Following construction of a starter embankment, the embankment slopes of the tailings facilities will generally be constructed with cyclone tailings.

TSF-1 is located north of the plant site area and will cover approximately 946 acres and accommodate about 231 million tons of tailings material (or 137.05 million cubic yards based on a density factor of 90 lbs/cu ft). TSF-2 is located south of the plant site area and will cover approximately 307 acres and accommodate about 47 million tons of tailings material (or 27.88 million cubic yards).

The maximum height of TSF-1 will be about 267 feet, with a top elevation of approximately 4,197 ft amsl. The TSF-1 embankment will be constructed on a 3:1 (H:V) continuous slope.

The maximum height of TSF-2 will be about 255 feet, with a top elevation of approximately 4,600 ft amsl. The TSF-2 embankment will be constructed on a 3:1 (H:V) continuous slope.

An underdrain collection system will be constructed at the bottom of the TSFs to capture seepage. Seepage water will drain to seepage collection trenches and be pumped to a Primary Settling Pond (also termed an Auxiliary Tailings Facility) for transfer back into the process circuit during operations. Seepage interceptor wells may also be installed.

The TSFs and associated pond/seepage collection systems are classified as potentially discharging facilities and are therefore regulated under AQEQ's APP Program. Discharging facilities have the potential to affect groundwater resources. As such, closure activities associated with the elimination of discharge at closure from the TSFs and ponds are attributable to ADEQ and covered under ADEQ's APP Program. This includes placement of a growth media (soil) cover. Although revegetation also contributes to discharge reduction through decreased infiltration of meteoric water into the tailings, this cost component was included in this MLRP.

Details on the closure costs for the TSFs are part of an APP Program submission to ADEQ for the Rosemont Copper World Project.

Processing and Ancillary Facilities

Soil within the plant site and ancillary facility areas will be salvaged and stockpiled as a first step. The Project plant facilities will process both sulfide and oxide copper ore. Process operations will involve crushing, grinding, flotation, molybdenum separation, concentrate dewatering, and leaching. The plant facilities are shown on **Figure 6** and are separated into three (3) main processes: Sulfide Mill, Oxide Leach, and a Concentrate Leach.

In the Sulfide Mill, the ore will be processed through a traditional crushing and concentrating circuit. Copper concentrate from this process will go either to 1) a Concentrate Leach circuit for further processing to produce a pregnant leach solution (PLS) or 2) a concentrate loadout facility in preparation for shipment offsite.

Sulfide ore is crushed in a primary crusher and is then conveyed to a coarse ore stockpile where material is drawn from the bottom of the stockpile using feeders. These feeders feed the milling circuit. The milling process includes a typical SAG-Ball Mill-Pebble Crushing circuit. The flotation circuit includes both rougher and cleaner froth flotation process.

In the flotation process, a copper-molybdenum separation step generates the final copper and molybdenum concentrate products. The copper-molybdenum concentrate is fed to a molybdenum rougher conditioning tank and molybdenum rougher/scavenger flotation cell circuit. Molybdenum concentrate product from the final cleaner stage of the separation circuit, and copper concentrate from the molybdenum rougher tails, are thickened and press filtered and dried. Molybdenum concentrate is loaded into bags for shipment offsite. Copper concentrate is either sent to the concentrate loadout facility in preparation for shipment offsite or sent to the Concentrate Leach circuit.

Oxide ore will also be processed at the site. Both ROM and crushed and agglomerated oxide ore may be placed on the HLP and leached. PLS from this leaching process is pumped to the SX-EW circuit for processing into copper cathodes. The crushing circuit for the oxide ore consists of a primary crusher that feeds a coarse ore stockpile. Material from the stockpile is drawn from the bottom of the stockpile using feeders. Crushed oxide ore material is then conveyed to an Agglomerator and then to the HLP via conveyors. Oversized material is screened and sent to a secondary crusher for further processing prior to reaching the Agglomerator. The Agglomerator mixes the crushed ore with acid prior to placement on the heap. Materials placed on the heap are then leached with a weak sulfuric acid solution. PLS is collected in a PLS Pond and pumped to the SX-EW circuit for processing where copper cathode is produced.

The Concentrate Leach process noted above includes an acid leach facility, sulfur recovery circuit, precious metals recovery circuit and a sulfur burner for acid capture. Sulfuric acid produced from this process is used for leaching oxide ore on the heap. Pregnant leach solution produced by the concentrate leach process will go to the SX-EW plant for plating.

Flotation tailings from the copper rougher and copper cleaner scavenger circuits are thickened and pumped to the TSFs. Tailings will be pumped as slurry and conveyed to the TSFs in 24-inch (or

less) diameter pipelines. The pipeline from the plant site to TSF-1 will be underground and will be constructed to avoid surface disturbance to BLM land (see **Figure 3**). The reclaim water return from tailings is also buried alongside of the tailings pipeline.

Reagents are stored, mixed and distributed from a central reagent area. The frother, collector, and depressant are pumped from the reagent area to head tanks in the flotation section.

A mine infrastructure area (MIA) is located in the general vicinity of the primary crushers. The MIA also has a maintenance shop, fuel station, and vehicle wash station.

General administration office buildings are located west of the processing plant facilities.

Utilities

The utilities associated with the Project include a freshwater pipeline (including well fields and pump stations), a utility maintenance road, and a high voltage transmission line. These will be located within a utility corridor and terminate at a switchyard/substation located west of the plant site as shown on **Figure 6**. Power will be distributed to the plant and other service areas from the substation.

A fresh-water delivery system (FWDS) waterline begins at a pump station on Rosemont's Sanrita South property and terminates at a second pump station on Rosemont's property located south-west of the plant site. Distribution water will then be taken from the pump station into a freshwater tank and distributed as needed to site facilities.

Production water wells are located on Rosemont's Sanrita South and Sanrita West properties (see **Figure 2**). Well water distribution system (WWDS) piping from both well fields feeds water to Pump Station No. 1 located at Sanrita South.

The high voltage transmission line is located within a right-of-way (ROW) on State land. The transmission line starts at a switchyard located at Sanrita South and terminates at the plant area. Fresh-water distribution lines (includes well water distribution) are also located within the State land ROW. Part of the WWDS is also located within a ROW located in the Town of Sahuarita (TOS). Costs associated with the removal of facilities and reclamation of disturbances within these ROWs are included in this MLRP. The production water wells are assumed capped at mine closure. Disturbances associated with the Utility Corridor are estimated at 73 acres.

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Section 6

Existing and Proposed Final Topography § R27-971, b.6

Rosemont owns property located in the northern portion of the Santa Rita Mountains in the Basin and Range physiologic province of the southwestern United States (**Figure 1**). The province is characterized by high mountain ranges adjacent to alluvial filled basins. The Basin and Range province has been further divided into the Mexican Highlands and Sonoran Desert sub provinces. The Santa Rita Mountains form the boundary between the Mexican Highlands of southeastern Arizona and the Sonoran Desert sub-province to the west.

Rosemont's property occupies relatively flat to mountainous topography in the northeastern and northwestern flanks of the Santa Rita Mountains. The Santa Rita Mountains separate the Cienega Basin to the east from the Santa Cruz Basin to the west. General property elevations range from about 3,600 feet amsl to over 6,300 feet amsl. The facility elevations associated with the Rosemont Copper World Project range from about 3,615 feet amsl to about 6,150 feet amsl.

The Project will, where possible, place materials in their final configuration throughout the life of the Project. As outer facility slopes are constructed during the life of mine, the slopes will be constructed at final reclamation angles and so that regrading of these slopes will not be required at Project closure. Existing topography is shown on **Figure 4**. Proposed final topography is shown on **Figure 5**. The exception is the heap leach pad. Post-closure regrading of the slopes is anticipated. These regrading costs are part of the APP Program.

Vegetation

The Project area covers three main vegetation communities. This includes the Desert (Scrub) Grasslands Community, the Desert and Semi-Desert Grasslands Community, and the Oak, Juniper, and Pinyon Community. Additionally, the utilities are mainly within the Mixed Palo Verde-Cacti Community along the utility corridor.

Existing vegetation along most of the utility corridor tends to be sparse, with species of Cholla (*Cylindropuntia spp.*), Prickly Pear (*Opuntia Spp.*), and other cacti being common at lower elevations. Saguaro (*Carnegiea Gigantea*) are present but not common. Invasive (introduced or non-native) plants occur in varying density along the utility corridor and include Lehmann Lovegrass (*Eragrostis Lehmanniana*), Buffelgrass (*Pennisetum Ciliare*) and Snakeweed (*Gutierrezia spp.*).

As the elevation increases in the Project area, vegetation density also increases and transitions into semi-desert grassland that supports abundant Catclaw Acacia (*Acacia Greggii*) and Mimosa (*Mimosa Aculeaticarpa*), Ocotillo (*Fouquieria Splendens*), and Yucca (*Yucca Spp.*). Tree species are mostly limited to Littleleaf Palo Verde (*Parkinsonia Microphyllum*) and low-stature Velvet Mesquite (*Prosopis Velutina*), both of which are more abundant along the Xeric Desert washes. The mesquite trees do not typically grow large due the lack of rainfall.

The grassland communities gradually transition into the Encinal Oak community near the crest of the Santa Rita Mountains east of the Copper World Pit area. Multiple species of Oak (e.g.,

Quercus Emoryi), Juniper (*Juniperus Spp.*) and other woody shrubs typical of the Encinal Oak community (e.g., *Vauquelinia Californica*) can be found in these higher elevation areas, with denser concentrations occurring along drainages and on northern exposures.

Section 7

Narrative Description of Proposed Roads § R27-971, B.7

Access to the Rosemont Copper World Project will be via Santa Rita Road as shown on **Figures 1 and 2**. Both the main Project facilities and the well field at Sanrita West and Sanrita South are accessed along this existing road.

Access to the plant site and majority of the Project facilities will be to the east of Santa Rita Road as shown on **Figure 2**. This includes access to the WRF, TSF-2, HLP, and open pit areas. Miscellaneous laydown yards, field offices, and a process water pond (Primary Settling Pond) are located to the west of Santa Rita Road. Santa Rita Road will require relocation in the TSF-1 area. TSF-1 will be located west of the relocated roadway.

Service roads within the plant site area will consist of two (2) 14-foot-wide travel lanes. These will be gravel roads with dust suppressant/binder to control dust. A guard shack will be located at the entrance to the plant site area immediately following the entrance off Santa Rita Road. Approximately 16,000-feet of service roads are located with the plant site area (see **Figure 6**). The reclamation of these service roads is included in the overall plant site reclamation acreage.

A utility maintenance road will be built along the utility corridor in the State land ROW and will be used to access the waterline and powerline as needed. This road can be accessed from Santa Rita Road at select locations and through the Sanrita South property. Reclamation of this maintenance road is included in the overall utility corridor reclamation acreage of 73 acres.

Service roads in the plant site area will also access the Mine Infrastructure Area (MIA) where haul trucks are serviced, etc., and where the primary crushers are located. Mine haul truck roads will be constructed past the MIA to access the heap leach, open pits, and WRF, etc. Haul roads will generally be 114-feet wide, inclusive of safety berms, and will support the traffic of the planned 250-ton off-highway mine haulage trucks. These haul roads are not shown on the figures.

Although the haul roads are generally coincident with other facilities, such as the WRF, reclamation of the haul roads was considered a separate item in this MLRP. In order to not double count disturbance acreages, the disturbance area attributed to haul roads was assumed to be in the “other” disturbed areas. The haul road disturbance area was therefore subtracted from that total.

Various other access and maintenance roads will be constructed as needed to support the Project. These roads are not called out separately but are included in other categories such as “yards” or “other disturbed areas”. Reclamation of these roads would include light regrading, scarifying and seeding. These similar reclamation activities would be applied to the “yard” areas or to the “other” disturbed areas.

As noted, these “other” disturbed areas comprise the remaining private land areas within the Project boundaries that are not accounted for in other facilities.

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Section 8

Acreage Affected by Each Type of Surface Disturbance with Map § R27-971, B.8

The land position of the Project is sufficient to allow mining of the open pits, processing of ore, storage of tailings, storage of waste rock, and operation of milling and flotation equipment, concentrate leach, and heap leaching operations. The Project encompasses the approximate disturbance areas presented in **Table 2**.

Table 2 depicts the acreages that will be disturbed as part of the Project. A total disturbance of 3,954 acres of land is assumed and includes all the land within the Rosemont private land boundaries (patented and fee) that is associated with the Main Project area (3,881 acres) plus 73 acres associated with the Utility Corridor. At final closure there will be approximately 567 acres of un-reclaimed portions of the open pits leaving a total of 3,387 acres to be reclaimed.

For the purposes of this MLRP, it is assumed that all areas located within the Project's main private land boundary will be disturbed, i.e., includes areas outside of designated facility footprints. Perimeter access and other maintenance roads, including monitoring stations, etc., may be placed in these areas.

Table 2 Disturbance Acreages

Disturbance Area	Disturbed Acres
Open Pits (excludes pits backfilled with waste rock)	567
Waste Rock Facility (main storage area)	725
Tailings Storage Facilities (TFS-1 and TSF-2)	1,253
Heap Leach Pad	336
Haul Roads (outside other disturbed areas)	58
Crushing, Processing and Support Facility Area (main plant site)	103
Other plant site facilities (includes stockpile areas)	70
Yards and Storage areas	77
Stormwater Controls	19
Miscellaneous Buffer and Disturbed Areas	673
Sub-Total Disturbance (main Project area)	3,881
Utility Corridor	73
Total Disturbance	3,954

Note: The total of pit disturbance areas prior to backfilling is about 831 acres.

Three (3) of the open pits will be backfilled with waste rock during operations: Heavy Weight, Copper World, and Broadtop Butte. Three (3) of the pits will remain open at closure and unreclaimed: Peach, Elgin, and Rosemont pits. Therefore, 3,387 acres will be reclaimed at closure (3,984 – 567).

A portion of the Copper World Project area (TSF-1) contains an area where the federally listed endangered Pima pineapple cactus has been identified. Transplanting of the cactus will occur

on other portions of Rosemont's private land. The Sonoran Desert Tortoise may also be encountered with in these same areas. Pre-disturbance surveys will be conducted, and tortoises relocated, per approved protocols. With the exception of TSF-1, the remainder of the Project lies within an area currently designated as jaguar critical habitat. No jaguars have been detected in the Santa Rita Mountains since 2015.

Additionally, historic mine openings located within facility footprints would be surveyed for bat species prior to land disturbance and bat exclusion activities would be implemented at appropriate openings to minimize impacts to bats. Both the translocation of plants and the exclusion of bats from historic mine openings would follow established protocols. No fish habitats will be affected.

Section 9

Proposed Reclamation Measures to Achieve Post Mining Land Use § R27-971, B.9

9.1 Measures that will be taken to Restrict Public Access to the Project § R27-971, B.9a

In order for the Rosemont operations to run safely and efficiently, it is important that the site be secure. Theft, vandalism, protestors, and illegal activity could potentially have a negative effect on worker safety, the environment, and operating efficiency. Therefore, Rosemont will be responsible for controlling access to the site with fencing, security patrols, and by limiting locations for officially entering and exiting the property.

Fencing will be built to encompass all of the primary mining and processing operations and facilities. Fencing will provide a zone restricted from public access and will also provide locations for environmental compliance monitoring. Signage on the fence will state that entrance into the Rosemont Copper World Project area is prohibited. A gatehouse will be located at the entrance to the plant site where the access road off of the existing Santa Rita Road intersects the fence. Six (6) foot high chain link fencing is planned to encompass the mine operational areas, including the open pits, tailings and waste rock areas.

As needed fencing will also be installed along the Utility Corridor. Fencing installed for this part of the Project will be barbed wire.

Fencing for post-closure safety will be coordinated with applicable agencies including the Mine Safety and Health Administration (MSHA) and the Arizona State Mine Inspector (ASMI). It will be the responsibility of Rosemont to maintain any of these safety measures. The fence(s) may be removed at some time in the post-closure period after considering grazing and safety needs. However, for the purposes of this MLRP it is assumed that all fencing will remain intact post-operations.

In addition to protecting the site from potential vandalism or theft, it is also important to protect the public from interfacing with mine operations and to prevent potential injury. Hazards of a typical mining operation include, but are not limited to, the following: traumatic injury or death from large equipment, entanglement in machinery, driving over steep embankments, slipping, or falling on uneven ground or slippery surfaces, encountering high-voltage electricity, blasting with potential for flyrock, exposure to chemicals or reagents while not wearing proper personal protective equipment, and exposure to loud noises while not wearing hearing protection. Employees working at the site are required to receive specific training in accordance with MSHA covers various aspects of site safety, whereas recreationists will likely have no training and may not recognize the hazards. Therefore, it is imperative to control access and to enforce trespassing rules. The same fencing, patrols and signage discussed above will serve to warn recreationists and others who may be in an area of potential danger. In addition, employees will be trained to be aware of trespassers in the course of their normal duties and report any suspicious activity.

The facilities will be designed to minimize the need for visitors or vendors to drive or walk into hazardous areas. Supply route drivers will receive site orientation training and will be familiarized with their specific loading/unloading locations and procedures.

9.2 Measures that will be taken to Address Erosion Control and Stability § R27-971, B.9b

During operations, erosion control will be addressed by operational control of stormwater. Post-mining reclamation will include either a coarse waste rock cover or a soil cover. All disturbed surfaces will be seeded and as needed stormwater controls installed. Geotechnical design will be ongoing during the mine planning process to confirm waste rock, heap and tailings outer slopes are stable, including pit slopes.

Foundation conditions underneath the waste rock, heap, and tailings outer slope areas will initially be inspected for the presence of unsuitable materials. These materials will be removed and placed to the interior of the facility areas or other appropriate areas as needed. Outer slopes are designed to be at or above recommended safety factors as provided in the Arizona Mining BADCT Guidance Manual (ADEQ 2004).

Waste rock will generally be placed to achieve an approximate overall slope of 2.2:1 (H:V). The overall outer slopes of the tailings storage facilities will be about 3:1 (H:V) and the overall heap leach slopes about 2.3:1 (H:V). Final slope configurations may be modified as part of operations. Geotechnical monitoring of facility slopes will occur during operations, including pit slope monitoring.

Operational Stormwater Controls

During the operational phase, the open pits and plant areas will be designed as a closed system with all precipitation and local runoff collected and used in the process. This will also be the case for the tailings and heap leach facilities.

As practicable, non-contact stormwater will be diverted around or through the facilities and to downgradient drainages. Stormwater that contacts those areas of the WRF that are constructed with NAG materials can also be routed offsite.

Diversion channels and other appropriate best management practices will be implemented as needed to direct stormwater and control erosion. Channel outlets will be armored to prevent erosion and sediment control structures (sediment basins) will be installed as needed to reduce the total suspended solids load to downgradient drainages. Sediment basins will be located and sized based on topography, available space, and the anticipated sediment generating capacity of the contributing basin. These unlined structures will typically be sized to be no more than 6 feet deep and will be constructed out of inert rockfill. The basins will be temporary structures that will collect stormwater flows, settle velocities so that the heavier wash load falls out, and allow water to slowly seep through the rockfill.

Stormwater and erosion controls associated with the closure of the HLF and TSFs are included in the estimate developed for an aquifer protection permit (APP) program (APP Program) submission to the Arizona Department of Environmental Quality (ADEQ) for the Rosemont Copper World Project.

Pre- and Post-Mining Temporary Sediment and Erosion Controls

Temporary erosion and sediment controls, including sediment basins, will be installed to reduce sediment loading in stormwater during the pre-mining construction of the ancillary facilities and pre-stripping of the facility areas, etc. Stormwater controls would also follow the Stormwater Pollution Prevention Plan (SWPPP) developed for the Project. Temporary Best Management Practices (BMPs) will be also installed to control erosion and sediment during closure demolition and reclamation activities.

Final reclamation of the facilities will result in stable conditions with regards to erosion. Stormwater channels will be rock lined and will be designed to handle specific storm events. Erosion protection will be added to stormwater channel outfalls. Outfalls will generally also include sediment basins. Topographic contour grading will be conducted as needed to establish suitable reclaimed facilities to route stormwater off the facilities. Inlets to stormwater channels or culverts will be designed to minimize the potential for blockage or restricted drainage.

At the end of the Project's mine life, all operational facilities not required for closure applications will be removed, the areas regraded, capped with growth media (as appropriate for the facility type), and seeded. Some sediment basins may be left in place, or new basins established, to control the sediment load to downgradient drainages. Stormwater routed off reclaimed facilities, such as the tailings and heap leach facilities, the waste rock facility, or from undisturbed upgradient areas, will be routed to existing downgradient drainages.

As noted, stormwater and erosion controls associated with the closure of the HLF and TSFs are included in the estimate developed for an APP Program Submission to ADEQ for the Rosemont Copper World Project

Measures taken to Preserve and Conserve Soil

Suitable cover soil materials (growth media) will be salvaged and used as cover during reclamation of the tailings and heap leach facilities. Waste rock stored in the WRF will also be used as needed during reclamation as a non-erosive rock cover. Additionally, the WRF will not be covered with growth media. Both soil and waste rock covered areas will be seeded with a native seed mix.

9.3 Measures to Address Revegetation, Conservation, and the Care and Monitoring of Revegetated Areas § R27-971, B.9c

The goal of the Project revegetation program is to meet state of Arizona requirements by establishing native, diverse and productive plant communities capable of stabilizing the soil against wind and water erosion and supporting the post-mining land uses of ranching and wildlife habitat. Most of the reclaimed landscape will be suitable for grazing once vegetation is established.

Based on the Arizona Department of Transportation Final Stabilization Standards, Rosemont is proposing that the vegetation cover required for final stabilization to be complete is 70% of the existing native vegetation coverage that is representative of the local area. This would be applicable to the top and slope areas of reclaimed, heap leach and tailings facilities and the reclaimed plant site area. Some areas, such as for the WRF, will have a coarse waste rock cover to resist erosion and therefore may demonstrate less than the 70% vegetation cover target.

9.4 Measures That Will Be Taken to Encourage Fish and Wildlife Post-Mining Land Use and Their Compatibility with Fish and Wildlife Habitat on Adjacent Lands § R27-971, B.9d

Wildlife habitat is a defined post-mining land use. Rosemont is planning reclamation of the facility to establish wildlife habitat. Species selected for use in the seed mix(s) must be native and common to the Project area and support wildlife habitat and commercially available. As noted, ranching will also be continued on the land post-mining. Therefore, selected species will also be chosen that are supportive of grazing.

Section 10

A Proposed Schedule for Reclamation Measures § R27-971, B.10

Figures 4 and 5 show existing and proposed topography for the site facilities. The Project includes a total of 3,954 acres of disturbed area. For the purposes of this MLRP, it is assumed that all of the area within the main Project private land boundary area will be disturbed, i.e., includes areas outside of designated facility footprints. Perimeter access and other maintenance roads, including monitoring stations, etc., may be placed in these areas.

A total of 3,387 acres of that total disturbance will be reclaimed. Approximately 567 acres of pit areas will not be reclaimed at closure. These include the Peach, Elgin and Rosemont pits. The remaining pits, Heavy Weight, Copper World, and Broadtop Butte, will be backfilled during operations and the final surfaces reclaimed at closure as part of the main Waste Rock Facility (WRF).

Mining is currently expected to be completed in 15 years. Post-mining reclamation will commence immediately upon the cessation of mining.

Initial reclamation activities are anticipated to be completed within a one (1) to two (2) year period following the cessation of operations. This will be followed by five (5) years of site reclamation monitoring and maintenance.

Active management of seepage/drain-down solutions from the tailings and heap leach facilities will also take place following the cessation of mining operations. Active management of heap leach drain-down solution will take place for approximately eight (8) years, followed by passive solution management. Drain-down solutions will be pumped to the top of the heap and actively evaporated using a “snowmaker” or similar device. Some of the existing HLF ponds would be converted to passive evaporation cells following active management when drain-down flows are minimal.

Final closure/reclamation of the heap leach facility will take place at the transition between active and passive solution management. The majority of costs for closure/reclamation of the heap leach and solution management facilities are associated with the elimination of discharge and are therefore covered under ADEQ’s APP program. This includes closure of the heap leach ponds, any recontouring of the heap surface, and the placement of a soil cover on the reclaimed heap. Costs included in this MLRP for the heap facilities include a light regrade, ripping, and seeding.

Similarly, active management of tailings seepage water will occur for TSF-1 and TSF-2. It is anticipated that active management would occur for approximately 30 years for TSF-1 and nine (9) years for TSF-2, followed by passive solution management. Post-closure seepage water collected in the underdrain system, or other collection systems such as interceptor wells, will be pumped to the Primary Settling Pond (also termed an Auxiliary Tailings Facility. Water would then be pumped to the top of the tailings and actively evaporated using a “snowmaker” or similar device. Some of the existing seepage collection facilities would be converted to

passive sulfate reducing cells (ore new cells constructed) following active management when seepage flows are minimal.

Final closure/reclamation of the tailings facilities will take place at the transition between active and passive solution management. As with the heap leach facilities, the majority of costs for closure/reclamation of the tailings and solution management facilities are associated with the elimination of discharge and are therefore covered under ADEQ's APP Program. This includes closure of an ponds associated with the tailings process, any recontouring of the tailings surface, and the placement of a soil cover on the reclaimed tailings. Costs included in this MLRP for the tailings storage facilities include a light regrade, ripping, and seeding.

In addition to solution management, up to 30 years of post-closure monitoring is also anticipated under ADEQ's APP Program at select point of compliance (POC) wells.

Section 11

Estimated Costs to Perform Each of the Proposed Reclamation Measures § R27-971, B.11

Reclamation cost estimates were performed using the Standard Reclamation Cost Estimator (SRCE) spreadsheets (SRCE 2021). Descriptions of cost estimating assumptions, reclamation activities and quantities, and resulting costs are provided in **Appendix A**. A cost summary is provided in **Table 3** below.

Table 3 Reclamation Cost Summary under ASMI's MLRP Program

Cost Element	Labor	Equipment	Material	Total
Earthwork/Recontouring	\$1,041,222	\$1,723,624	\$149,289	\$2,914,135
Revegetation/Stabilization	\$482,124	\$172,189	\$1,344,698	\$1,999,011
Waste Disposal	-	-	-	\$143,213
Structure, Equipment, and Facility Removal	\$8,718,267	\$3,663,271	\$266,568	\$12,648,106
Monitoring	\$105,331	\$23,913	\$134,469	\$263,713
Construction Management and Support	\$33,677	\$6,578	\$0	\$40,255
Indirect Costs	-	-	-	\$6,401,034
Total	\$10,380,621	\$5,589,575	\$1,895,024	\$24,409,467

Closure costs associated with those facilities regulated under ADEQ's aquifer protection permit (APP) program (APP Program) were also estimated as part of preparing an application submittal to that agency. The closure strategy and associated costs under ADEQ's APP Program relate to the elimination of discharge following the cessation of operations versus costs associated with reclamation, erosion control, and general infrastructure demolition and removal required by the ASMI. Reclamation and closure costs are apportioned as needed to the respective agency to avoid double bonding.

The closure costs associated with ADEQ's APP Program without fluid management/monitoring is estimated to between \$26 million to \$30 million dollars.

Using a combined reclamation and closure cost estimate of \$55 million (ASMI and ADEQ) for the Rosemont Copper World Project (without fluid management), and a total reclaimed area of 3,387 acres, the cost per acre of reclamation is about \$16,200.

With respect to bonding for disturbances associated with the Rosemont Copper World Project, staged bonding for the Project is requested. Bonding will be revisited as needed depending on permitting advancements and Project development. A per acre reclamation estimate of \$2,000 is proposed instead of the approximate per acre estimate of \$1,500 calculated herein for minor regrading, scarifying, and seeding. As a note, the \$2,000 per acre number is the standard ASMI uses for exploration type projects.

As such, Rosemont proposes to establish a minimum bond amount of \$7,908,000 under the MLRP Program for this Project to account for potential disturbances on all 3,954 acres of land listed in **Table 2**.

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Section 12

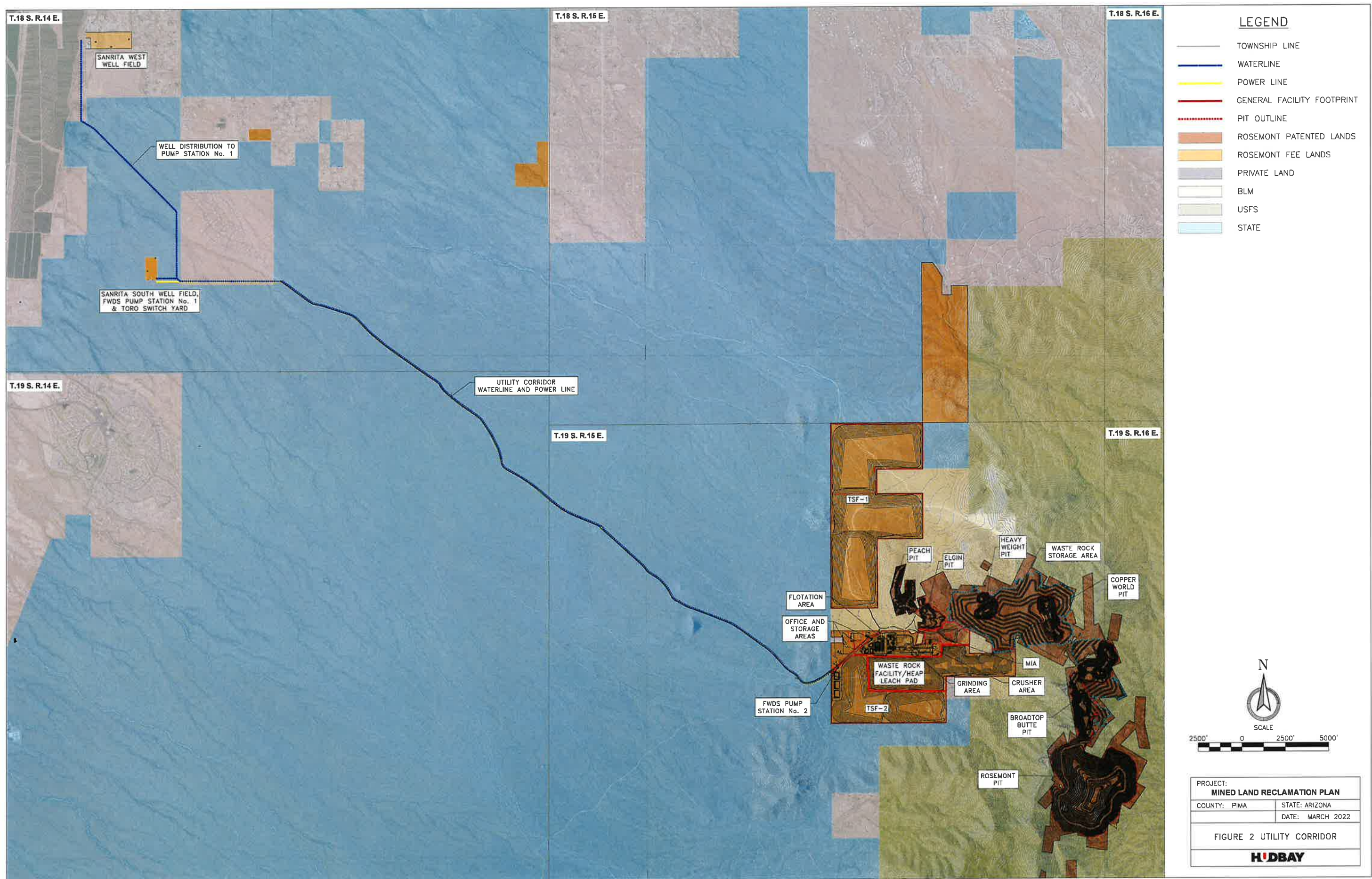
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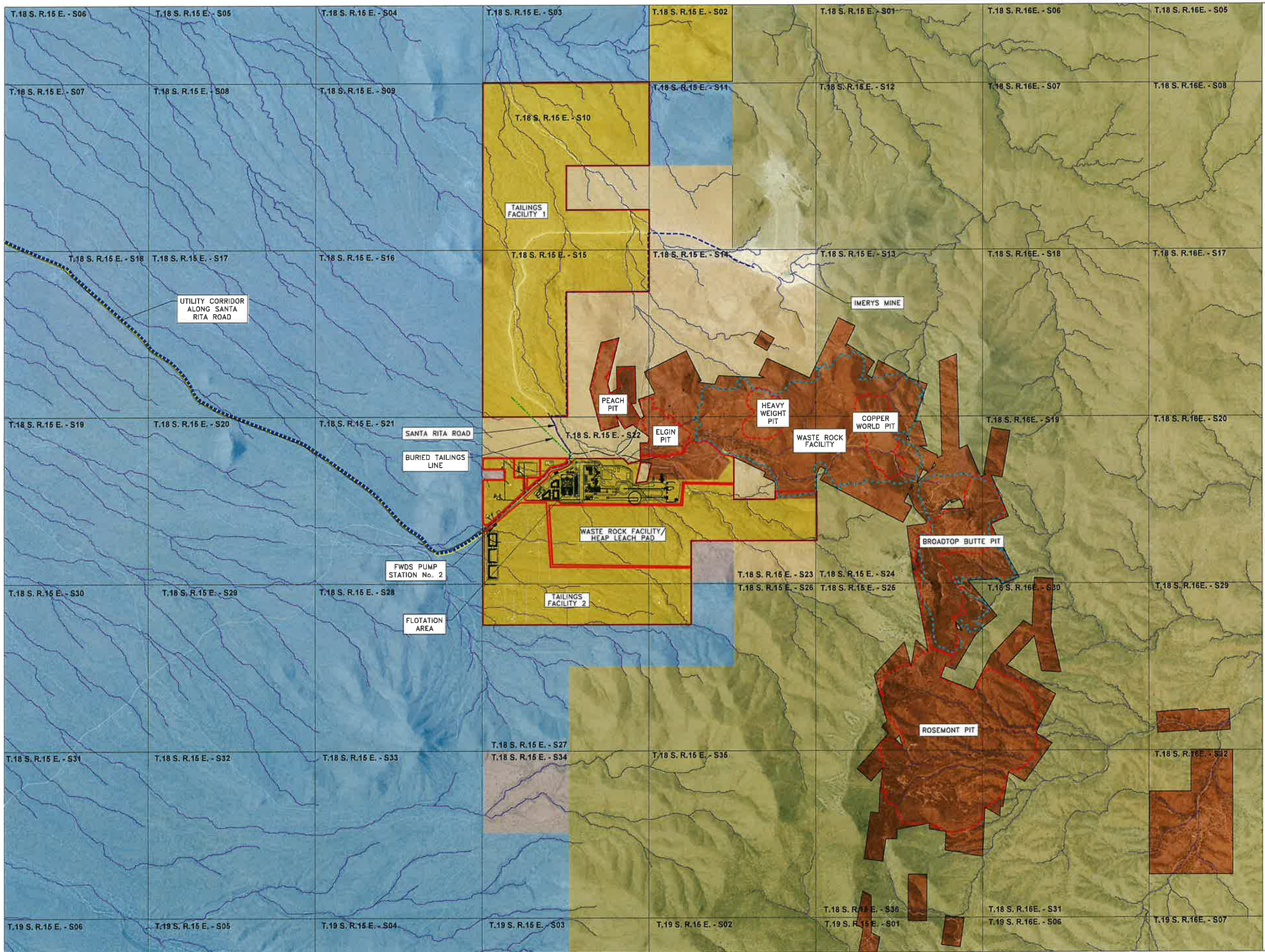
ADEQ, 2004. Arizona Mining BADCT Guidance Manual. Publication # TB 04-01.

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Figures

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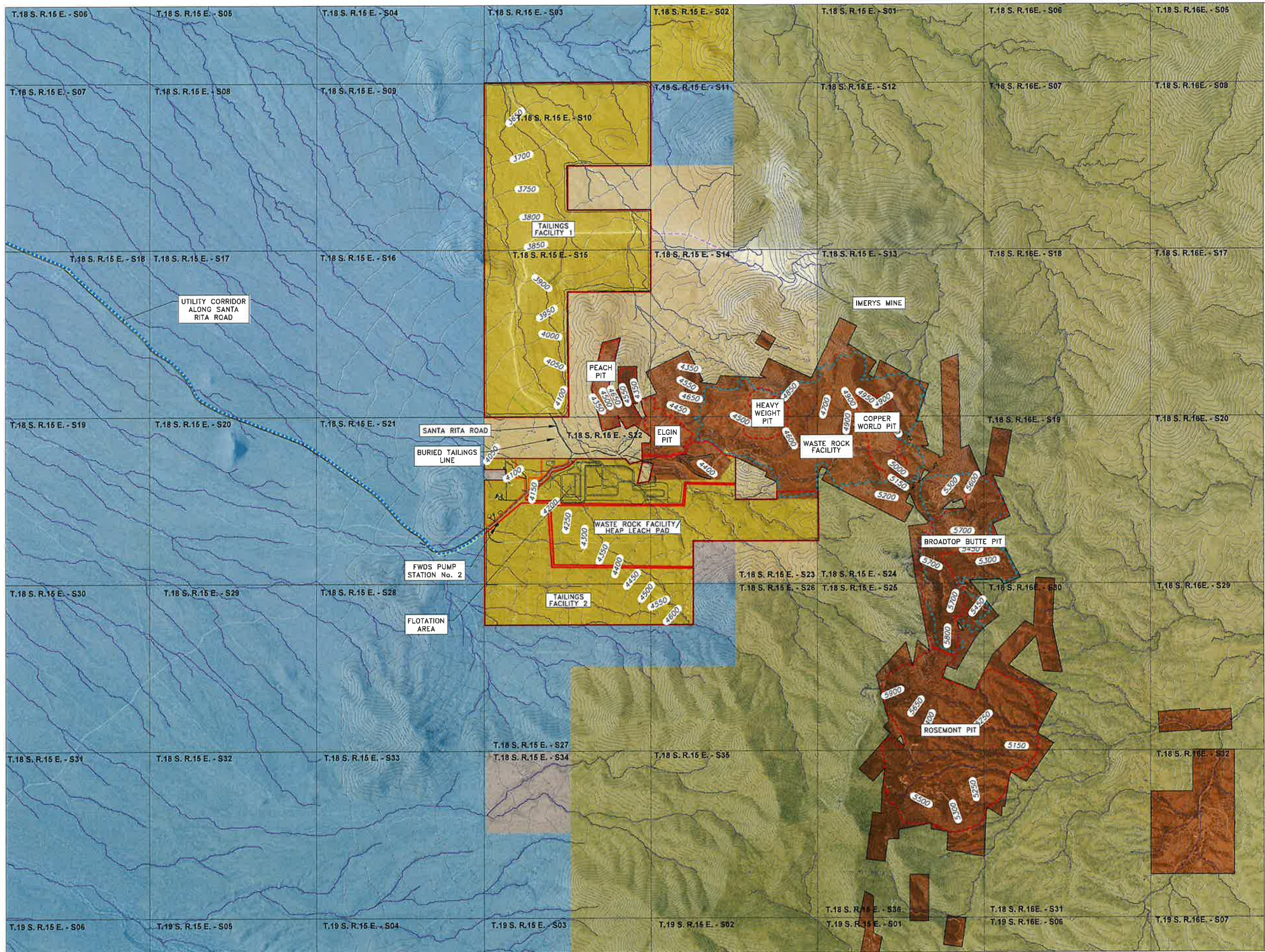
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- WATERLINE
- POWER LINE
- GENERAL FACILITY FOOTPRINT
- PIT OUTLINE
- WASTE ROCK FACILITY (WRF)
- BURIED TAILINGS LINE
- ROAD
- PIMA COUNTY FLOODPLAIN
- ROSEMONT PATENTED LANDS
- ROSEMONT FEE LANDS
- PRIVATE LAND
- BLM
- USFS
- STATE

NOTES:

- HEAVY WEIGHT, COPPER WORLD AND BROADTOP BUTTE PITS ARE BACKFILLED WITH WASTE ROCK.
- MINE HAUL AND ACCESS ROADS NOT SHOWN.
- FACILITY FOOTPRINT BOUNDARIES ARE APPROXIMATE.

SCALE
1500' 0 1500' 3000'
CONTOUR INTERVAL = 10'

PROJECT: ROSEMONT COPPER WORLD PROJECT	
COUNTY: PIMA	STATE: ARIZONA
DATE: APRIL 2022	
FIGURE NO. 3 PROPOSED PROJECT FACILITIES OVERALL	
HUBBAY	

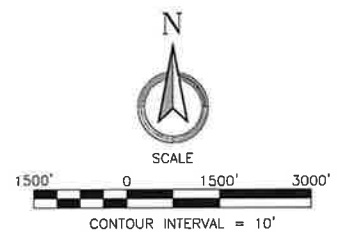


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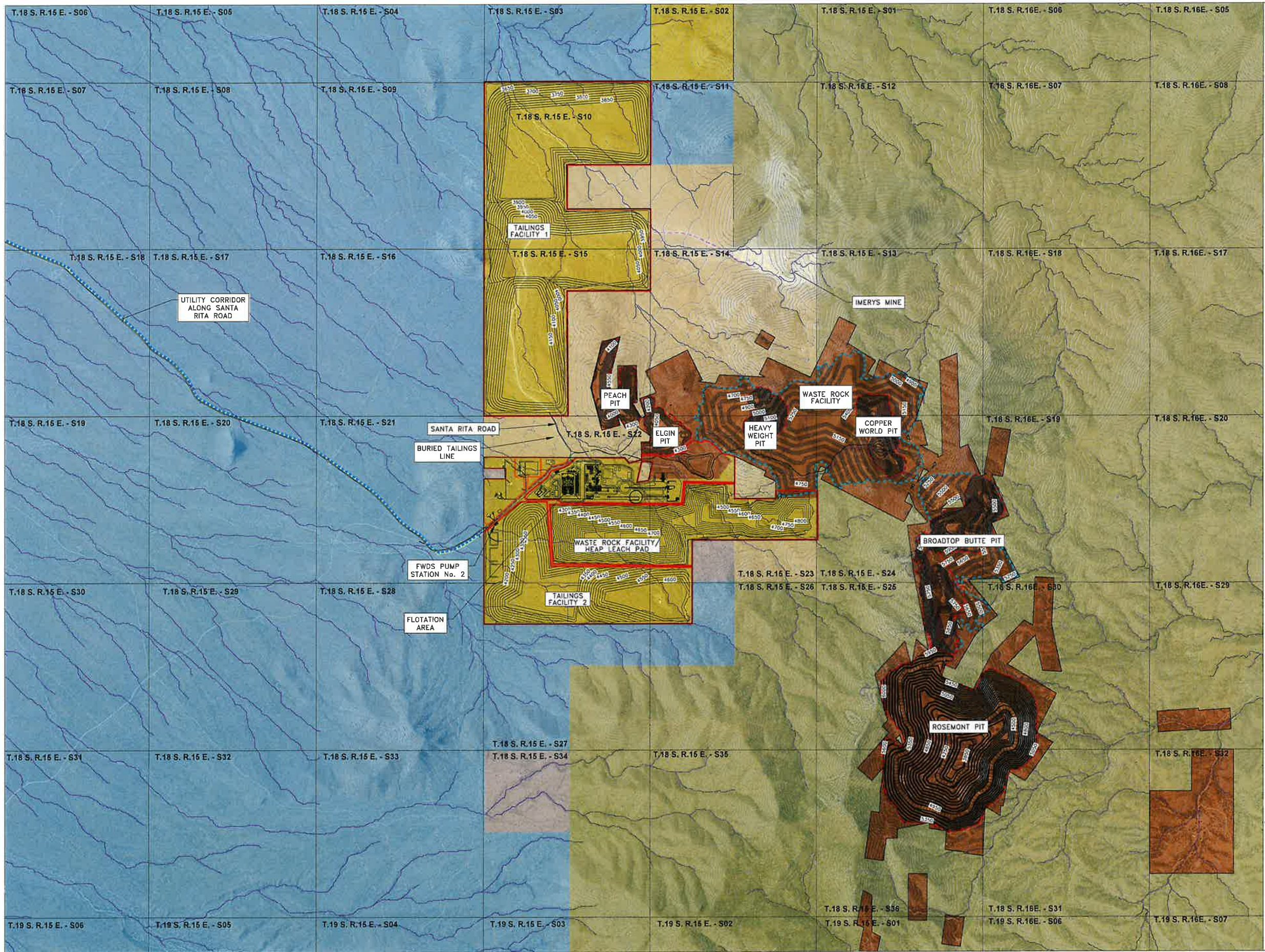
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- WATERLINE
- POWER LINE
- GENERAL FACILITY FOOTPRINT
- PIT OUTLINE
- WASTE ROCK FACILITY (WRF)
- BURIED TAILINGS LINE
- ROAD
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- ROSEMONT PATENTED LANDS
- ROSEMONT FEE LANDS
- PRIVATE LAND
- BLM
- USFS
- STATE

NOTES:

- HEAVY WEIGHT, COPPER WORLD AND BROADTOP BUTTE PITS ARE BACKFILLED WITH WASTE ROCK.
- MINE HAUL AND ACCESS ROADS NOT SHOWN.
- FACILITY FOOTPRINT BOUNDARIES ARE APPROXIMATE.



PROJECT: ROSEMONT COPPER WORLD PROJECT	
COUNTY: PIMA	STATE: ARIZONA
DATE: APRIL 2022	
FIGURE NO. 4 EXISTING TOPOGRAPHY	
HUBBAY	



LEGEND

- TOWNSHIP LINE
- WATERLINE
- POWER LINE
- GENERAL FACILITY FOOTPRINT
- PIT OUTLINE
- WASTE ROCK FACILITY (WRF)
- BURIED TAILINGS LINE
- ROAD
- PIMA COUNTY FLOODPLAIN
- ROSEMONT PATENTED LANDS
- ROSEMONT FEE LANDS
- PRIVATE LAND
- BLM
- USFS
- STATE

NOTES:

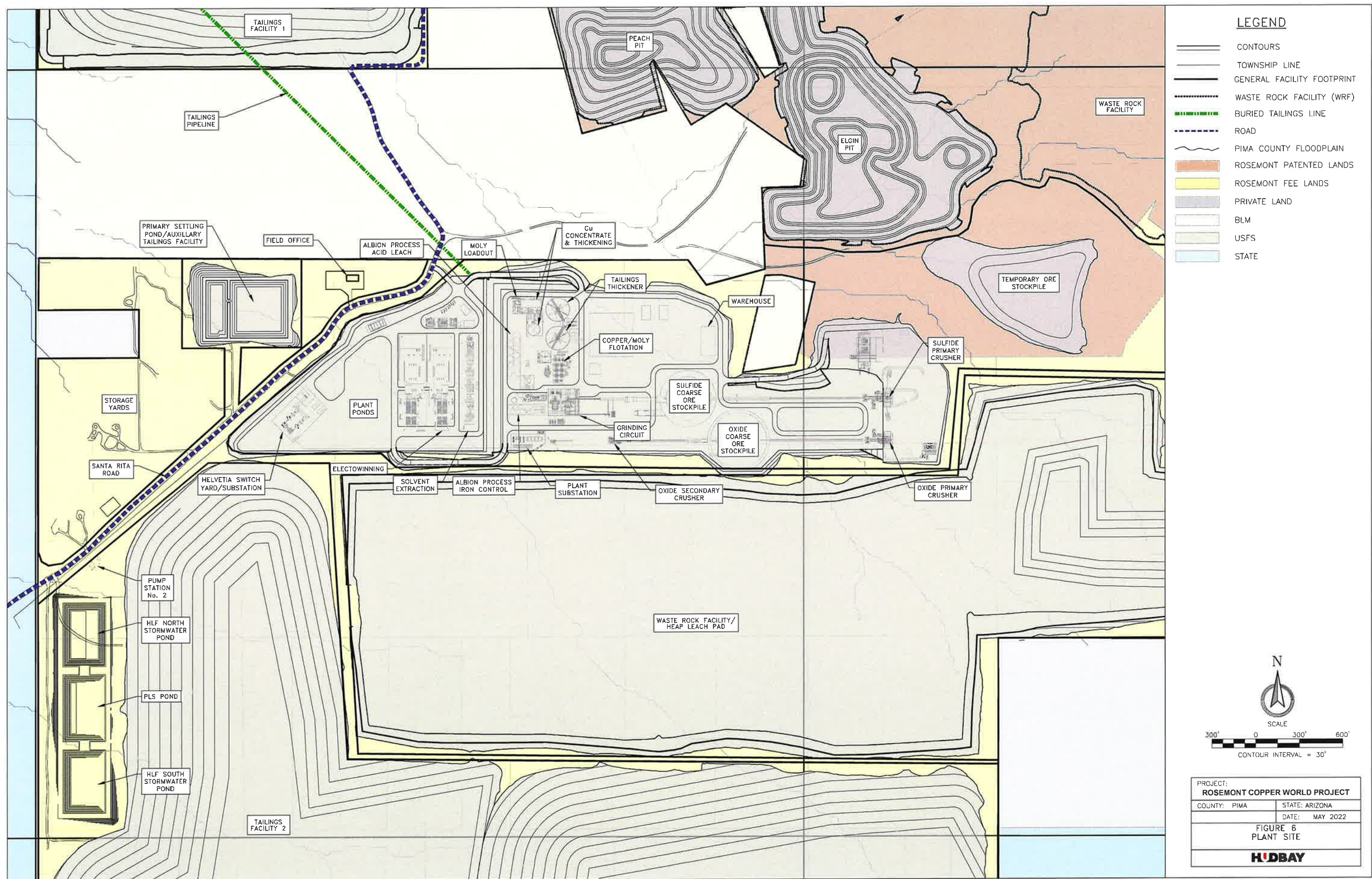
- HEAVY WEIGHT, COPPER WORLD AND BROADTOP BUTTE PITS ARE BACKFILLED WITH WASTE ROCK.
- MINE HAUL AND ACCESS ROADS NOT SHOWN.
- FACILITY FOOTPRINT BOUNDARIES ARE APPROXIMATE.

SCALE

1500' 0 1500' 3000'

CONTOUR INTERVAL = 10'

PROJECT: ROSEMONT COPPER WORLD PROJECT	
COUNTY: PIMA	STATE: ARIZONA
DATE: APRIL 2022	
FIGURE NO. 5 PROPOSED TOPOGRAPHY	



Appendix A

Reclamation Cost Estimates

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Memorandum

Rosemont Copper World Mined Land Reclamation Plan April 2022

Reclamation Cost Basis

This document outlines the reclamation process and assumptions behind developing reclamation costs for the Rosemont Copper World Project (Project) in Pima County, Arizona as part of the Mined Land Reclamation Plan submitted to the Arizona State Mine Inspector (ASMI). Reclamation costs were estimated using the Standard Reclamation Cost Estimator (SRCE) software from the Nevada Division of Environmental Protection (<https://ndep.nv.gov/land/mining/reclamation/reclamation-cost-estimator>) developed as a collaborative effort between the Nevada Department of Environmental Protection, Bureau of Mining Regulation and Reclamation, U.S. Department of Interior, Bureau of Land Management, and Nevada Mining Association. The SRCE utilizes standardized reclamation calculation methods, productivity data and procedures, and user-inputted data to create a cost-estimate for mine closure and reclamation activities.

The information below summarizes each applicable reclamation component for the Project at closure and the SRCE model assumptions used to calculate the reclamation costs. It was assumed that large or medium sized equipment would be used for all activities. It was also assumed that salvaged growth media (soil) would be stockpiled for use as cover on the tailings facilities (TSFs), heap leach, plant site and in other areas as needed. For the purposes of this MLRP, it was assumed that salvaged soil material for the Plant Site area would be stockpiled within or adjacent to this same area. No additional soil cover would be placed on the reclaimed surfaces of the WRF. Material from the WRF could also be used as non-erosive rock cover for other facilities where needed.

All reclaimed areas would be seeded with native species.

Cost-Data

Cost-Data was imported from the SRCE database as a User-Generated Data file using the Southern Nevada cost basis with minor adjustments made for Pima County, AZ. The Southern Nevada database costs are related to the Las Vegas, Nevada area (Clark County, Nevada) which are considered similar to costs in the Tucson, Arizona area (Pima County, Arizona) where the Rosemont Copper World Project is located. Labor rates and indirect costs are based on latest available (2020 and 2021) Arizona Davis-Bacon rate schedules for equipment operators and laborers. Project management and technical labor are based on RS Means 2020 labor rates. Materials costs, equipment operating rates, fuel usage, and equipment maintenance costs are based on regional vendor quotes, RS Means 2020, and CAT Handbook. Details for pricing are provided within the cost summary sheets attached.

Waste Rock Facility

For cost estimation, one (1) main waste rock facility (WRF) is assumed for the Project. Waste rock is also placed in other portions of Project. However, reclamation costs associated with those portions of the Project are included in other respective facilities such as the heap leach, plant site, etc.

The main WRF was divided into two sections, a west portion and an east portion. The west portion of the WRF extends from the east edge of the Elgin Pit to the east edge of the Copper World Pit. The east portion of the WRF extends from the east edge of the Copper World Pit to

the northern boundary of the Rosemont Pit. The footprint of the WRF covers approximately 725 acres (2-dimensional area) or 762 acres (3-dimensional area), 355 acres of which are considered sloped and 407 acres of flatter top and bench areas.

It is assumed that the top areas of the WRF would require minor regrading to provide proper drainage post-closure. A volume equal to one (1) foot over 1/3 of the top WRF areas would be graded. The top areas would then be scarified and seeded.

The slopes of the WRF would be placed at their final configuration during operations. Waste rock is placed in 100-foot lifts at an overall slope angle of 2.2: 1 (H:V). A 24-foot-wide bench will be placed every 100-foot lift. Inner bench angles will be about 1.4:1 (H:V). The sloped areas would be seeded at closure. No other surface preparation is anticipated on these rocky slopes.

Heap Leach

The Project contains one (1) heap leach facility (HLF) that included a heap leach pad (HLP) and lined ponds. The closure of the heap leach and associated ponds are accounted for in a closure cost estimate developed as part of an APP Program submission to ADEQ for the Rosemont Copper World Project. However, costs for minor grading, scarifying and seeding of the full area of the heap leach pad and process ponds are included in this MLRP (within the 'Yards' module) to account for disturbances occurring prior to and after heap leach construction and to account for any disturbance that might occur between the facility and the property boundaries.

Tailings

The Project contains two (2) tailings facilities. The closure of the tailings and associated infrastructure are accounted for in a closure cost estimate developed as part of an APP Program Submission to ADEQ for the Rosemont Copper World Project. However, reclamation costs for minor grading, scarifying and seeding of the full area of the tailing's facilities are included in this MLRP (within the 'Yards' module) to account for disturbances occurring prior to and after tailings facility construction and to account for any disturbance that might occur between the facilities and the property boundaries.

Roads

Within the Rosemont Copper World Project area there are haul roads and access roads that will require reclamation work. The reclamation process was slightly different for each type of road and is further explained below.

Haul Roads

There are approximately 3.9 miles of on-site haul roads (outside of pit areas) with an average width of 114-feet. These will be reclaimed to a width of 20-feet to allow for future monitoring and maintenance access. For reclamation, approximately 94-feet of the haul road width will be regraded and seeded. The cover soil will be salvaged from the cut/fill material placed adjacent to the haul roads during construction. It is assumed that the haul roads each have a 6-foot safety berm on one side of the road. Culverts are also dispersed throughout the haul roads, the reclamation process for those is explained in the Misc. Costs section.

Utility Corridor Access Road

The utility corridor contains an approximate 12.1-mile access road with an average disturbance width of 30-feet (about 40 acres of disturbance). It was assumed that there were no safety berms on this road, and that the entire width would be reclaimed at mine closure. It is also assumed that the FWDS and WWDS pipelines lie within the reclamation area of the access road.

It was assumed that miscellaneous areas associated with the utility corridor, including powerline tower bases, pump stations, and other access areas, would be reclaimed as part of the access road disturbance. These miscellaneous areas total about 33 acres for a total utility corridor area of 73 acres. The utility corridor access road would be regraded, scarified and seeded. It is assumed that any required cover soil would be salvaged from available regraded road materials.

Within the utility corridor there are 12.1 miles of water pipeline associated with both the fresh water delivery system (FWDS) and the well water distribution system (WWDS). For convenience, the reclamation of the pipeline corridor was included in the SRCE road costs module. Pipeline removal is included under the Misc. Costs. After pipeline removal, the corridor area would be regraded, scarified and seeded as part of reclamation of the utility corridor road reclamation. It is assumed that any required cover soils would be material salvaged during the installation and removal of the pipeline.

Pits

At closure, pit access will be restricted by the addition of fencing around the entire pit perimeter (see Misc. Costs). Therefore, no safety berms are included. This applies to the Peach, Elgin and Rosemont pits. Other pits, Heavy Weight, Copper World, and Broadtop Butte, will be backfilled with waste rock as part of the main waste rock facility.

Quarries and Borrow Pits

The Project does not currently include any quarries or borrow pits that would be located outside of the current facility footprints.

Underground Openings

This MLRP does not currently include a provision for the closure of underground openings. Closure of historic mine openings would occur during Project construction or during operations.

Haul Material

The Project does not currently include any additional haul material for outside sources.

Foundations & Buildings

The total square footage of buildings and other structures is estimated at about 630,340 square feet. Structures include those associated with crushing, grinding and flotation circuits, copper concentrate and molybdenum loadout areas, concentrate leach facilities, tailings thickeners, reagent storage areas, solvent extraction and electrowinning facilities, mine infrastructure and maintenance areas, substations, administration and warehouse buildings, and other miscellaneous mine-support facilities. The dimensions in the SRCE are estimates and for each structure includes an eve height, 6-inch or 12-inch slab thickness (depending upon the type of building), foundation wall thickness and foundation wall height.

For reclamation, the concrete foundations will be broken and buried in place, with about 4-feet of cover placed on top. Cover, including growth media, will be obtained from materials immediately adjacent to the area. The building areas will then be graded using soil from original construction grading. Regraded disturbed areas will then be scarified and seeded.

Other Demo & Equip Removal

Demolition of two pump stations, which are part of the fresh-water delivery system, was included in the calculations. Demolition cost was estimated at \$63,000 for each pump station. The approximate 1,700-foot-long buried tailings slurry pipeline between the mill and TSF-1 is assumed to be 24-inches in diameter and will be closed in place by filling with cement grout.

Sediment & Drainage Control

For stormwater control and sediment control at closure, an estimate based on similarly sized projects was used for the total length of diversion channels and amount of sediment basins.

Diversion Ditches

Stormwater diversion channels not included as part of costs associated with the APP Program cost estimate for the Rosemont Copper World Project are included herein. It is estimated that approximately 30,350 feet of diversion channels will be required at closure for inclusion in this MLRP. Of this total, it was assumed that 6,350 feet would require riprap armoring. Calculations included riprap on the bottom and sides of these ditches.

Sediment Basins

It was assumed that there would be up to five additional sediment basins constructed during the 24-month reclamation and closure period in addition to the ones constructed during operations at various locations around the Project. Each basin is estimated to be 100-feet by 300-feet and have a depth of 6-feet. The calculations used, assumed that all excavated material would be used to build a berm around the sediment basin. It was also assumed that no liners would be installed in the ponds. These areas are also assumed to be reclaimed and seeded.

Process Ponds, Landfills

The Project does not include an active landfill. Additionally, costs associated the closure of process related ponds are included in an estimate developed as part of an APP Program submission to ADEQ for the Rosemont Copper World Project. However, costs for light regrading, scarifying, and seeding of these pond areas is included in this MLRP.

Yards

A number of areas are included in the 'Yards' module that will have different reclamation treatments. The main plant site areas, including adjacent facility and stockpile areas, will be graded, covered with soil (stockpiled cover soil), scarified, and seeded. (Note: Building areas are reclaimed under the 'Foundations and Buildings' module).

Other "Yard" areas will be reclaimed by minor grading, scarifying, and seeding. These areas include general yard/storage areas (77 acres) and buffer areas between facilities and property boundaries (673 acres). In addition, the footprint areas of TSF-1, TSF-2, heap leach pad, and process pond areas are included in the "Yards" module. Reclamation of these areas will include minor grading, scarifying and seeding. Other closure costs associated with discharge reduction are included in the APP Program submission to ADEQ.

Waste Disposal

Most solid waste during closure will be removed from the site as part of the building demolition costs. Additional (miscellaneous) solid waste removal is estimated to be 2,000 cubic yards. It is assumed that solid waste dumpsters would be rented over the estimated initial 12 to 24-month reclamation period.

Well Abandonment

Wells included in the cost-estimate include 10 dewatering wells. Each dewatering well is assumed to be 12-inches in diameter and 1,000 feet in depth. The reclamation cost-estimate assumes that the holes would be grouted and capped at surface with neat cement. For this MLRP, it is assumed that only dewatering wells associated with the Rosemont Pit would require abandonment at closure. Abandonment of the dewatering wells associated with the remaining pits would occur during operations.

Point of Compliance (POC) monitoring wells were assumed to remain as part of the ADEQ Aquifer Protection Permit Program. Production water wells in the Sanrita West and Sanrita South areas were assumed to be capped but not abandoned. Five (5) production wells are planned.

Misc. Costs

Miscellaneous costs included fence installation around the pits to restrict access, culvert and buried pipe removal/abandonment, and power line and switchyard/substation removal.

Fence Installation

A six (6) foot high chain link fence with barbed wire is assumed to be installed around the perimeter of the private land holdings associated with the Project at the time of construction. This fencing is assumed to be left intact at closure with respect to this MLRP. The same chain link fencing will be installed around the remaining interior portions of the Elgin Pit at closure. Small section of fencing at the Peach and Rosemont pits will also be added. The length of fencing installed at closure is estimated to be about 6,530 feet.

Culvert and Buried Pipe Removal/Abandonment

The removal of the 12.1-mile-long freshwater delivery system pipeline within the utility corridor is included in this portion of the estimate. The pipeline length is estimated at 64,000-feet and is assumed to be 24-inches in diameter. This portion of the SRCE is only relevant for the removal of this pipeline. The reclamation costs for this area are calculated in the previous section for Roads.

Removal of the culverts underneath the Haul Roads and Access Roads was also included in this section. It was assumed there were 10 culverts per mile of haul road (3.9 miles total length outside of the pits), each 140-feet in length and 24-inches in diameter. In order to preserve a 20-foot access road along these haul roads for future maintenance activities, it was assumed that a 40-foot length segment would be left in place at each culvert location. The removal of culverts associated with the former plant site roads were assumed to consist of 10 culverts, each 60-feet in length and 24-inches in diameter. Reclamation of these plant site roads was included in the general area grading.

It was assumed that no culverts were installed along the 12.1-mile length of the utility access road.

The approximate 1,700-foot-long buried tailings slurry pipeline between the mill and TSF-21 is assumed to be 24-inches in diameter and will be closed in place by filling with cement grout. Reclamation costs are discussed above under Other Demo & Equipment.

Power Line and Switchyard/Substation Removal

For reclamation of the site, 9.1-miles of main powerline, Toro switchyard, on-site power lines and on-site substations will be removed. On-site substations include Helvetia, plant, and two SX-EW rectifier/substations. On-site powerlines are assumed to total 0.5 miles in length. It was assumed the powerlines are single pole construction. Reclamation of disturbed areas associated with removal of the powerlines and substations is assumed coincident and part of the water line removal and reclamation cost and general plant site reclamation costs.

Reclamation Maintenance and Monitoring

For reclamation maintenance, it was assumed that 10% of the total revegetation area would need to be reseeded per year. It was also assumed that 10% of the graded and reclaimed area would need erosion maintenance per year. Maintenance was assumed to occur for 5 years. This includes those reclaimed areas associated with the larger facilities such as the heap, tailings and WRF.

Reclamation monitoring during the 5-year reclamation and monitoring period is included in this MLRP.

No soil or water sampling is included in the cost estimate. These costs are accounted for in a closure estimate developed for an APP Program submission to ADEQ for the Rosemont Copper World Project.

Construction Management and Road Maintenance

It was assumed that reclamation could be completed in 24 months of full-time work. Construction management costs includes one supervisor working full time (8 hours per day) for the duration of the reclamation and closure period (24 months). These costs are accounted for in a closure estimate developed for an APP Program submission to ADEQ for the Rosemont Copper World Project. Field office and associated field services were also included in the estimate developed for ADEQ for the 24-month reclamation and closure period.

Road maintenance and dust control during active reclamation and closure were also accounted for in the cost estimate developed for an APP Program submission to ADEQ for the Rosemont Copper World Project.

For construction management during the 5-year reclamation monitoring and maintenance period, one part-time (12 hours per quarter) supervisor was assumed. A field office and associated field services were also included in the estimate provided in this MLRP to cover the 5-year reclamation monitoring and maintenance period.

Closure Cost Estimate
Property Information

Enter Data Below in Green and Blue Spaces

STANDARDIZED RECLAMATION COST ESTIMATOR

Version 1.4.1

Build 017b (Revised 16 May 2019)

Approved for use in Nevada, August 1, 2012

COST DATA FILE INFORMATION	
File Name:	Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Cost Data File:	SRCE_Cost_data-USR_1_12.xlsm
Cost Data Date:	April 15, 2022
Cost Data Basis:	User Data Data Cost Units: Imperial
Author/Source:	CDM Smith

PROJECT INFORMATION	
Property/Mine Name:	Rosemont Copper World Project Property Code:
Project Name:	Rosemont Copper World Mined Land Reclamation Plan
Date of Submittal:	May 3, 2022 Average Altitude: 4300 ft.
Select One:	<input type="checkbox"/> Notice or Sm Exploration Plan <input type="checkbox"/> Lg Exploration Plan <input checked="" type="checkbox"/> Mine Operation
Select One:	<input type="checkbox"/> Private Land <input checked="" type="checkbox"/> Public or Public/Private
Cost Estimate Type:	Surety
Cost Basis Category:	Southern Nevada - Adjusted for Arizona Clark, Esmeralda, Lincoln and Nye Counties - Adjusted for Pima County, AZ
Cost Basis Description:	

Closure Cost Estimate
Table of Contents

e: Rosemont Copper World Mined Land Reclamation Plan

Project Date: May 3, 2022

it_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Reclamation Plan

Table of Contents

Property Information
Cost Summary
Exploration
Exploration Roads & Pads
Waste Rock Dumps
Heap Leach Pads
Tailings
Roads
Pits
Quarries & Borrow Pits
Underground Openings
Material Hauling
Foundations and Buildings
Other Demo & Equipment Removal
Sediment & Drainage Control
Process Ponds
Landfills
Yards, Etc.
Waste Disposal
Well Abandonment
Misc. Costs
Monitoring
Construction Management
Solution Management
Other User
Reclamation Quantities
Labor Costs
Equipment Costs
Material Costs
Misc. Unit Costs
Fleets (Crews)
Productivity
User Tools
Seed Mixture
User Sheet 1
User Sheet 2
User Sheet 3
User Sheet 4
User Sheet 5
User Sheet 6
User Sheet 7
User Sheet 8
User Sheet 9
User Sheet 10

Description

**Closure Cost Estimate
Table of Contents**

User Sheet 11
User Sheet 12
User Sheet 13
User Sheet 14
User Sheet 15
User Sheet 16
User Sheet 17
User Sheet 18
User Sheet 19
User Sheet 20

Note: Pages 5, 33, 34, 35, 60, 61, 64, 65, 71, 110-131 deleted (blank pages)

**Closure Cost Estimate
Cost Summary**

Project Name: Rosemont Copper World Mined Land Reclamation Plan

Project Date: May 3, 2022

Model Version: Version 1.4.1

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

A. Earthwork/Recontouring	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$20,695	\$78,491	\$0	\$99,186
Well Abandonment	\$135,406	\$252,808	\$21,161	\$409,375
Pits	\$0	\$0	N/A	\$0
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings	\$0	\$0	\$0	\$0
Process Ponds	\$0	\$0	\$0	\$0
Heaps	\$0	\$0	\$0	\$0
Waste Rock Dumps	\$29,954	\$121,651	\$0	\$151,605
Landfills	\$0	\$0	\$0	\$0
Tailings	\$0	\$0	\$0	\$0
Foundation & Buildings Areas	\$57,566	\$140,736	\$0	\$198,302
Yards, Etc.	\$308,368	\$1,053,908	\$0	\$1,362,276
Drainage & Sediment Control	\$242,111	\$76,030	\$128,128	\$446,269
Generic Material Hauling	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal	\$794,100	\$1,723,624	\$149,289	\$2,667,013
Mob/Demob if included in Other User sheet	\$0	\$0	\$0	\$0
Mob/Demob See Mob/Demob Workbook	\$247,122			\$247,122
Subtotal "A"	\$1,041,222	\$1,723,624	\$149,289	\$2,914,135
B. Revegetation/Stabilization	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Exploration	\$0	\$0	\$0	\$0
Exploration Roads & Drill Pads	\$0	\$0	\$0	\$0
Roads	\$17,692	\$6,320	\$49,695	\$73,707
Well Abandonment				N/A
Pits	\$0	\$0	\$0	\$0
Quarries & Borrow Areas	\$0	\$0	\$0	\$0
Underground Openings				N/A
Process Ponds	\$0	\$0	\$0	\$0
Heaps	\$0	\$0	\$0	\$0
Waste Rock Dumps	\$106,704	\$38,109	\$299,724	\$444,537
Landfills	\$0	\$0	\$0	\$0
Tailings	\$0	\$0	\$0	\$0
Foundation & Buildings Areas	\$6,048	\$2,160	\$7,432	\$15,640
Yards, Etc.	\$349,020	\$124,650	\$980,373	\$1,454,043
Drainage & Sediment Control	\$2,660	\$950	\$7,474	\$11,084
Generic Material Hauling	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal "B"	\$482,124	\$172,189	\$1,344,698	\$1,999,011
C. Detoxification/Water Treatment/Disposal of Wastes**	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Process Ponds/Sludge				\$0
Heaps				\$0
Dumps (Waste & Landfill)				\$0
Tailings				\$0
Surplus Water Disposal				\$0
Monitoring				\$0
Miscellaneous				\$0
Solid Waste - On Site	\$0	\$0	N/A	\$0
Solid Waste - Off Site				\$143,213
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal "C"	\$0	\$0	\$0	\$143,213
D. Structure, Equipment and Facility Removal, and Misc.	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Foundation & Buildings Areas	\$6,794,566	\$3,285,993	\$0	\$10,080,559
Other Demolition	\$82,472	\$78,560	\$18,428	\$179,460
Equipment Removal	\$0	\$0	\$0	\$0
Fence Removal	\$0	\$0	\$0	\$0
Fence Installation	\$59,292	\$9,338	\$248,140	\$316,770
Culvert Removal	\$1,037,634	\$289,380	N/A	\$1,327,014
Pipe Removal	\$0	\$0	N/A	\$0
Powerline Removal	\$449,318			\$449,318
Transformer Removal	\$294,985			\$294,985
Rip-rap, rock lining, gabions	\$0	\$0	\$0	\$0
Other Misc. Costs	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal "D"	\$8,718,267	\$3,663,271	\$266,568	\$12,648,106
E. Monitoring	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials	Total
Reclamation Monitoring and Maintenance	\$105,331	\$23,913	\$134,469	\$263,713
Ground and Surface Water Monitoring	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Subtotal "E"	\$105,331	\$23,913	\$134,469	\$263,713
F. Construction Management & Support	Labor	Equipment ⁽²⁾	Materials	Total
Construction Management	\$33,677	\$6,578	N/A	\$40,255
Construction Support	\$0	\$0	\$0	\$0
Road Maintenance	\$0	\$0	\$0	\$0
Other User Costs (from Other User sheet)	\$0	\$0	\$0	\$0
Other**				\$0
Subtotal "F"	\$33,677	\$6,578	\$0	\$40,255
Subtotal Operational & Maintenance Costs	Labor ⁽¹⁾	Equipment ⁽²⁾	Materials ⁽³⁾	Total
Subtotal A through F	\$10,380,621	\$5,589,575	\$1,895,024	\$18,008,433

** Other Operator supplied costs - additional documentation required.

**Closure Cost Estimate
Cost Summary**

Project Name: Rosemont Copper World Mined Land Reclamation Plan

Project Date: May 3, 2022

Model Version: Version 1.4.1

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Indirect Costs		Include?	Total	
1. Engineering, Design and Construction (ED&C) Plan (7)			\$1,080,506	
2. Contingency (8)			\$1,080,506	
3. Insurance (9)		\$155,709	\$155,709	
4. Performance Bond (10)			\$540,253	
5. Contractor Profit (11)			\$1,800,843	
6. Contract Administration (12)			\$1,440,675	
7. Government Indirect Cost (13)			\$302,542	
Subtotal Add-On Costs			\$6,401,034	
Total Indirect Costs as % of Direct Cost			36%	
GRAND TOTAL			\$24,409,467	
Administrative Cost Rates (%)				
	Cost Ranges for Indirect Cost Percentages			
	<=	<=	<=	>
1. Engineering, Design and Construction (ED&C) Plan (7)	\$1,000,000	\$25,000,000		\$25,000,000
Variable Rate	8%	6%		4%
	<=	<=	<=	>
2. Contingency (8)	\$500,000	\$5,000,000	\$50,000,000	\$50,000,000
Variable Rate	10%	8%	6%	4%
3. Insurance (9)	1.5%	of labor costs		
4. Bond (10)	3.0%	of the O&M costs if O&M costs are >\$100,000		
5. Contractor Profit (11)	10%	of the O&M costs		
	<=	<=	<=	>
6. Contract Administration (12)	\$1,000,000	\$25,000,000		\$25,000,000
Variable Rate	10%	8%		6%
Government Indirect Cost (13)	21%	of contract administration		

RECLAMATION COST ESTIMATION SUMMARY SHEET FOOTNOTES

NOTE :

1. Federal construction contracts require Davis-Bacon wage rates for contracts over \$2,000. Wage rate estimates may include base pay, payroll loading, overhead
2. The reclamation cost estimate must include the estimated plugging cost of at least one drill hole for each active drill rig in the project area. Where the submitted
3. Miscellaneous items should be itemized on accompanying worksheets.
4. Fluid management should be calculated only when mineral processing activities are involved. Fluid management represents the costs of maintaining proper fluid
5. Handling of hazardous materials includes the cost of decontaminating, neutralizing, disposing, treating and/or isolating all hazardous materials used, produced, or
6. Any mitigation measures required in the Plan of Operations must be included in the reclamation cost estimate. Mitigation may include measures to avoid,
7. Engineering, design and construction (ED&C) plans are often necessary to provide details on the reclamation needed to contract for the required work. To
8. A contingency cost is included in the reclamation cost estimation to cover unforeseen cost elements. Calculate the contingency cost as a percentage of the O&M
9. Insurance premiums are calculated at 1.5% of the total labor costs. Enter the premium amount if liability insurance is not included in the itemized unit costs.
10. Federal construction contracts exceeding \$100,000 require both a performance and a payment bond (Miller Act, 40 USC 270et seq.). Each bond premium is
11. For Federal construction contracts, use 10% of estimated O&M cost for the contractor's profit.
12. To estimate the contract administration cost, use 6 to 10% of the operational and maintenance (O&M) cost. Calculate the contract administration cost as a

Closure Cost Estimate Other User

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Other User Costs				
	Labor	Equipment	Materials & Capital	Totals
Other Cost Items	\$0	\$0	\$0	\$0

**Closure Cost Estimate
Reclamation Quantities**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Data Cost File: SRCE_Cost_data-USR_1_12.xlsm
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Reclamation Quantity Summary												Unit Costs					
	Description	Total Regrade or Haul Volume cy	Total Regrade or Haul Cost \$	Total Cover Volume cy	Cover Placement Cost \$	Total Growth Media Volume cy	Growth Media Placement Cost \$	Total Surface Area acres	Total Scarify Cost \$	Total Revetation Cost \$	TOTALS \$	Regrade Unit Cost \$/CY	Material Haul or Backfill Unit Cost \$/CY	Cover Unit Cost \$/CY	Growth Media Unit Cost \$/CY	Scarify Unit Cost \$/CY	Area Unit Cost \$/acre
1	Waste Rock Dumps	219,000	\$ 32,618		\$ -		\$ -	762.17	\$ 118,987	\$ 444,537	\$ 596,142	\$0.15	N/A			\$156.12	\$782.16
2	Tailings Impoundments		\$ -		\$ -		\$ -		\$ -	\$ -	\$ -		N/A				
3	Heap Leach Pads		\$ -		\$ -		\$ -		\$ -	\$ -	\$ -		N/A				
5	Open Pits		\$ -							\$ -	\$ -		N/A				
4	Quarries & Borrow Pits		\$ -		\$ -		\$ -		\$ -	\$ -	\$ -		N/A				
6	Roads	64,701	\$ 65,237				\$ -	126.37	\$ 33,949	\$ 73,707	\$ 172,893	\$1.01	N/A			\$268.65	\$1,368.15
7	Landfills		\$ -		\$ -		\$ -		\$ -	\$ -	\$ -		N/A				
8	Buildings			70,198	\$ 116,703	29,251	\$ 63,659	18.9	\$ 17,940	\$ 15,640	\$ 213,942		N/A	\$1.66	\$2.18	\$949.21	\$11,319.68
9	Yards	116,950	\$ 218,219	248,453	\$ 385,111		\$ -	2493	\$ 758,946	\$ 1,454,043	\$ 2,816,319	\$1.87	N/A	\$1.55		\$304.43	\$1,129.69
10	Ponds		\$ -				\$ -		\$ -	\$ -	\$ -	N/A					
11	Exploration Roads		\$ -				\$ -		\$ -	\$ -	\$ -		N/A				
12	Exploration Trenches		\$ -				\$ -		\$ -	\$ -	\$ -		N/A				
13	Diversion Ditches		\$ 17,213					13.5	\$ 7,874	\$ 25,087			N/A				\$1,858.30
14	Sediment Ponds	24,665	\$ 13,785	8,875			\$ 10,130	5.5	\$ 2,300	\$ 3,210	\$ 29,425	\$0.56	\$0.64			\$418.18	\$5,350.00
15	Generic Haulage/Backfill		\$ -		\$ -		\$ -		\$ -	\$ -	\$ -	N/A					
16	Adit/Decline Backfilling1		\$ -									N/A					
17	Shaft Backfilling		\$ -								\$ -	N/A					
TOTALS		425,316	\$ 347,072	327,526	\$ 501,814	29,251	\$ 73,789	3,419.44	\$ 932,122	\$ 1,999,011	\$ 3,853,808						
Average Costs		per CY	\$0.82	per CY	\$1.53	per CY	\$2.52	per acre	\$272.59	\$2.14	\$1,127	per acre					

**Closure Cost Estimate
Exploration**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Exploration - Cost Summary				
	Labor	Equipment	Materials	Totals
Hole Abandonment Costs	\$0	\$0	\$0	\$0
Trench Backfilling Costs	\$0	\$0	\$0	\$0
Subtotal Earthworks	\$0	\$0	\$0	\$0
Trench Revegetation Costs	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

**Closure Cost Estimate
Expl. Roads & Pads**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Exploration Roads & Pads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$0	\$0		\$0
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

Closure Cost Estimate
Waste Rock Dumps

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$6,445	\$26,173	N/A	\$32,618
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$23,509	\$95,478	N/A	\$118,987
Subtotal Earthworks	\$29,954	\$121,651	\$0	\$151,605
Revegetation Cost	\$106,704	\$38,109	\$299,724	\$444,537
TOTALS	\$136,658	\$159,760	\$299,724	\$596,142

Waste Rock Dumps - User Input																					
Facility Description				Physical - MANDATORY									Cover				Growth Media				
	Description (required)	ID Code	Type	Underlying Ground Slope	Ungraded Slope	Final Slope	Final Top Slope	Lift (dump) Height	Mid-Bench Length	Average Flat Area Long Dimension (ripping distance)	Final (Regraded) Dump Footprint	Regrade Volume (1) (If calculated elsewhere)	Cover Thickness Slopes	Cover Thickness Flat Areas	Distance from Cover Borrow	Slope from Dump to Cover Borrow	Slope Growth Media Thickness	Flat Area Growth Media Thickness	Distance from Growth Media Stockpile	Slope from Dump to Stockpile	
				% Grade	H:1V	H:1V	% Grade	ft	ft	ft	acres	cy	in	in	ft	% grade	in	in	ft	% grade	
1	WRF		Waste Rock Dump	10.0	2.0	2.0	1.0	1,025	6,750	6,750	725.00	219000									

- Notes:
- 1. All Physical parameters must be input even if manual overrides for volume or area are used.
 - 2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
 - 3. Flat tops and benches regraded, scarified and seeded. Regrading assumed to be 1/3 flat areas and average 1 foot depth to provide proper drainage (219,000 cubic yards).
 - 4. Sloped areas seeded; no regrading or scarifying.

Closure Cost Estimate
Waste Rock Dumps

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$6,445	\$26,173	N/A	\$32,618
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$23,509	\$95,478	N/A	\$118,987
Subtotal Earthworks	\$29,954	\$121,651	\$0	\$151,605
Revegetation Cost	\$106,704	\$38,109	\$299,724	\$444,537
TOTALS	\$136,658	\$159,760	\$299,724	\$596,142

Waste Rock Dumps - User Input (cont.)																			
You must fill in ALL green cells and relevant blue cells in this section for each dump, lift or dump category																			
		Grading				Cover		Growth Media		Revegetation									
	Description (required)	Regrading Material Condition (select)	Regrading Material Type (select)	Regrading Equipment Fleet (select)	Slot/Side-by- Side (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Seed Mix Slopes (select)	Seed Mix Areas (select)	Flat (select)	Mulch Slopes (select)	Mulch Flat Areas (select)	Fertilizer Slopes (select)	Fertilizer Flat Areas (select)	Slope Scarify/ Rip? (select)	Flat Area Scarify/ Rip? (select)	Scarify/ Ripping Fleet (select)
1	WRF	1	LS - broken	Large	Yes					Mix 4	Mix 4		None	None	None	None	No	Yes	Large Dozer

Notes:
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

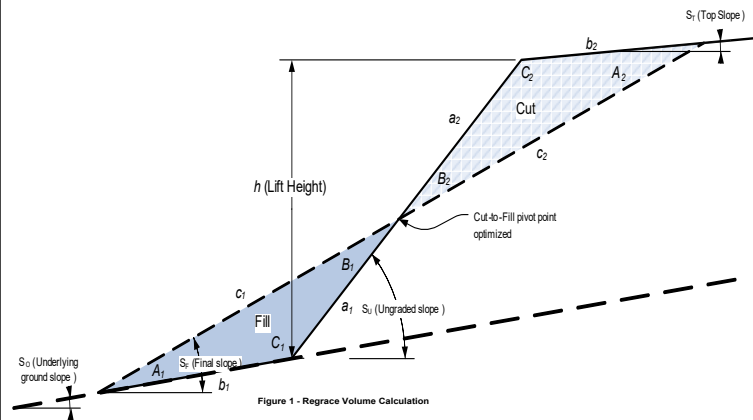
Closure Cost Estimate Waste Rock Dumps

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$6,445	\$26,173	N/A	\$32,618
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$23,509	\$95,478	N/A	\$118,987
Subtotal Earthworks	\$29,954	\$121,651	\$0	\$151,605
Revegetation Cost	\$106,704	\$38,109	\$299,724	\$444,537
TOTALS	\$136,658	\$159,760	\$299,724	\$596,142

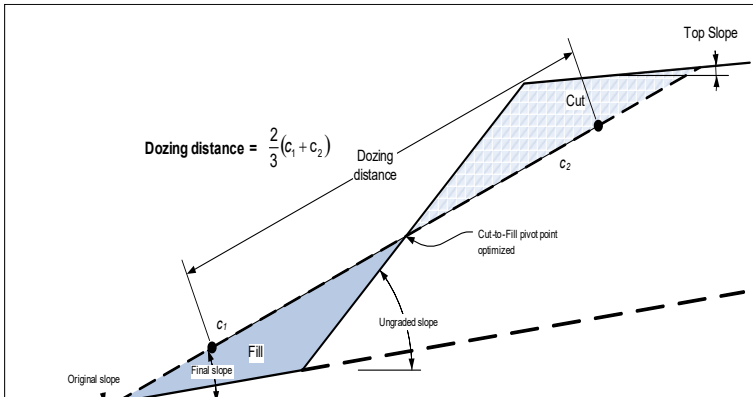
Waste Rock Dumps - Calculations

Regrading Volume Calculation

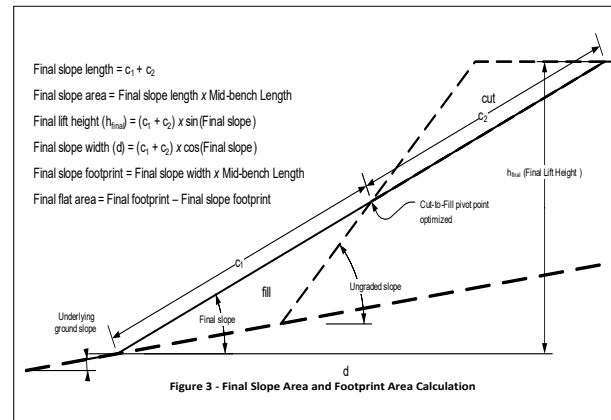


Regrading Push Distance Calculation

dozing distance: based on 2/3 final cut slope + 2/3 final fill slope (minimum = 50 ft)



Final Slope Area and Footprint Area Calculations



Ripping/Scarifying Calculations

Minimum 1 hr ripping/scarifying time per dump

Slopes:

Number of passes = Final slope length ÷ Grader width
Travel distance = Number of passes x Mid-bench length
Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)
Minimum 1 hr

Flat Areas:

Flat area width = Final flat area ÷ Average long dimensions
Number of passes = Flat area width ÷ Grader width
Travel distance = Number of passes x Average long dimensions
Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)

Revegetation: Minimum 1 acre revegetation crew time per area

**Closure Cost Estimate
Waste Rock Dumps**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$6,445	\$26,173	N/A	\$32,618
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$23,509	\$95,478	N/A	\$118,987
Subtotal Earthworks	\$29,954	\$121,651	\$0	\$151,605
Revegetation Cost	\$106,704	\$38,109	\$299,724	\$444,537
TOTALS	\$136,658	\$159,760	\$299,724	\$596,142



Figure 2 - Dozing Distance Calculation

**Closure Cost Estimate
Waste Rock Dumps**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$6,445	\$26,173	N/A	\$32,618
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsail Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$23,509	\$95,478	N/A	\$118,987
Subtotal Earthworks	\$29,954	\$121,651	\$0	\$151,605
Revegetation Cost	\$106,704	\$38,109	\$299,724	\$444,537
TOTALS	\$136,658	\$159,760	\$299,724	\$596,142

Waste Rock Dumps - Regrading Costs

Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side) x (Altitude Deration)

	Description (required)	Regrading Volume cy	Dozing Distance (see above) ft	Regrading Fleet	Uncorrected Dozer Productivity cy/hr	Grade Correction	Dozing Material	Density Correction	Side-by-Side or Slot Dozing	Total Hourly Productivity cy/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	WRF	219,000	50	D10R	2,934	1.6	1.0	0.88	1.2	3,086	71	\$6,445	\$26,173	\$32,618
		219,000									71	\$6,445	\$26,173	\$32,618

Waste Rock Dumps - Cover and Growth Media Costs

		Cover (lower layer)								Growth Media Placement							
	Description (required)	Cover Volume cy	Cover Replacement Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Cover Labor Cost \$	Cover Equipment Cost \$	Total Cover Cost \$	Growth Media Volume cy	Growth Media Replacement Fleet	Fleet Productivity BCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Growth Media Cost \$
1	WRF						\$0	\$0	\$0						\$0	\$0	\$0
							\$0	\$0	\$0						\$0	\$0	\$0

Waste Rock Dumps - Scarifying/Revegetation Costs

	Description (required)	Slope Area acres	Flat Area acres	Total Surface Area acres	Final Slope Length ft	Flat Area Long Dimension ft	Ripping/ Scarifying Fleet	Slope Scarifying/ Ripping Hours hrs	Flat Area Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	WRF	355.17	407.00	762.17	2,292	6,750	D10R		259	\$23,509	\$95,478	\$118,987	\$106,704	\$38,109	\$299,724	\$444,537
		355.17	407.00	762.17					259	\$23,509	\$95,478	\$118,987	\$106,704	\$38,109	\$299,724	\$444,537

Notes: 1) Minimum total ripping hours = 1 (i.e. If total ripping hrs (slope + flat) < 1, then one hour of fleet time is assumed, regardless of acres shown in in scarifying table.)
2) Assumes 50min/hr equipment availability

Closure Cost Estimate Heap Leach

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Heap Leach Pads - Cost Summary				
	Labor	Equipment	Materials	Totals
Drain Installation	\$0	\$0	\$0	\$0
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$0	\$0	\$0	\$0
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

Bond Calculation Tailings

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Tailings - Cost Summary				
	Labor	Equipment	Materials	Totals
Embankment Regrading Cost	\$0	\$0	N/A	\$0
Tailings Surface Grading Cost	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$0	\$0	\$0	\$0
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

Closure Cost Estimate Roads

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$12,889	\$52,348	N/A	\$65,237
Cover Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$7,806	\$26,143	N/A	\$33,949
Subtotal Earthworks	\$20,695	\$78,491		\$99,186
Revegetation Cost	\$17,692	\$6,320	\$49,695	\$73,707
TOTALS	\$38,387	\$84,811	\$49,695	\$172,893

Roads - User Input														
You must fill in ALL green cells and relevant blue cells in this section for each road														
Facility Description				Physical (1) - MANDATORY						User Overrides		Growth Media		
	Description (required)	ID Code	Type	Underlying Ground Slope % grade	Ungraded Slope H:1V	Cut Slope degrees	Road Width ft	Road Length ft	Slope Replacement Percent %	Regrade Volume (if calculated elsewhere) cy	Disturbed Area (if calculated elsewhere) acres	Growth Media Thickness in	Haul Distance from Growth Media Stockpile ft	Slope from Road to Stockpile % grade
1	Main Haul Road to Rosemont Pit		Haul Road	20.0	1.0	70.0	94.0	18,734	20%					
2	Spur haul roads to other pits		Haul Road	20.0	1.0	70.0	94.0	2,063	20%					
3	Utility Corridor Access Road - pipe corridor		Access Road	5.0	1.0	70.0	30.0	63,888	20%					
4	Utility Corridor Miscellaneous Areas		Access Road	5.0	1.0	70.0	50.0	23,000	20%					

Notes:

- All Physical parameters must be input even if manual overrides for volume or area are used.
- If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
- Because the work required for building roads with a dozer is similar to that required to regrade a road with a dozer, this sheet could be used to provide a rough estimate of road construction costs if a dozer is selected as the grading fleet.
- Assumes graded road material vegetated in place without need for growth media**
- Utility corridor miscellaneous areas include road spurs, pump stations, power pole pads, and plant site switch yard/sub station. (Total utility corridor reclamation = 73 acres)**

Roads - User Input (cont.)						
Haul Road Safety Berms						
	Description (required)	Berm Length ft	Berm Height ft	Berm Base Width ft	Berm Sideslope Angle H:1V	Number of Berms (2) (1 or 2 sides)
1	Main Haul Road to Rosemont Pit	3,015.0	6.0	12.0	1.0	1
2	Spur haul roads to other pits	8,527.0	6.0	12.0	1.0	1
3	Utility Corridor Access Road - pipe corridor	0.0	0.0	0.0	0.0	
4	Utility Corridor Miscellaneous Areas	0.0	0.0	0.0	0.0	

(2) Enter 1 if berm on only one side of road, 2 if both sides of road are bermed.

Closure Cost Estimate Roads

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$12,889	\$52,348	N/A	\$65,237
Cover Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$7,806	\$26,143	N/A	\$33,949
Subtotal Earthworks	\$20,695	\$78,491		\$99,186
Revegetation Cost	\$17,692	\$6,320	\$49,695	\$73,707
TOTALS	\$38,387	\$84,811	\$49,695	\$172,893

Roads - User Input (cont.)													
You must fill in ALL green cells and relevant blue cells in this section for each road													
		Grading				Growth Media			Revegetation				
	Description (required)	Regrading Material Condition (select)	Regrading Material Type (select)	Regrading Equipment Fleet (select)	No. of Excavators if grade >30% (select)	Growth Media Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarifying/ Ripping? (select)	Ripping Fleet (select)
1	Main Haul Road to Rosemont Pit	1	Alluvium	Lg Dozer					Mix 4	None	None	Yes	Large Dozer
2	Spur haul roads to other pits	1	Alluvium	Lg Dozer					Mix 4	None	None	Yes	Large Dozer
3	Utility Corridor Access Road - pipe corridor	1	Alluvium	Lg Dozer					Mix 4	None	None	Yes	Med Dozer
4	Utility Corridor Miscellaneous Areas	1	Alluvium	Lg Dozer					Mix 4	None	None	Yes	Med Dozer

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table
2. If original slope >30% only excavators are allowed.

Closure Cost Estimate Roads

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
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Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$12,889	\$52,348	N/A	\$65,237
Cover Placement Cost	\$0	\$0	N/A	\$0
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Subtotal Earthworks	\$20,695	\$78,491		\$99,186
Revegetation Cost	\$17,692	\$6,320	\$49,695	\$73,707
TOTALS	\$38,387	\$84,811	\$49,695	\$172,893

Roads - Calculations

Regrading Volume and Footprint Volume

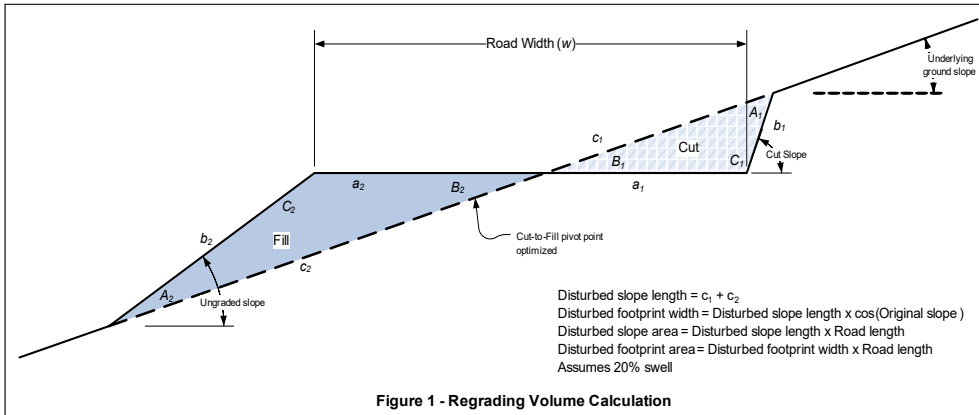


Figure 1 - Regrading Volume Calculation

Will not allow dozer for slopes greater than 30%
 For dozer regrading push distance = road width
 Assumes dozer push is uphill
 Assumes minimum push distance of 100 ft

Ripping/Scarifying Calculations

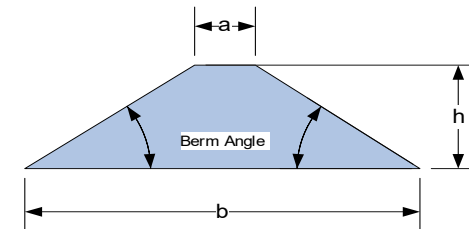
Minimum 1 hr ripping/scarifying time per area
 Number of passes = Final slope length ÷ Grader width
 Travel distance = Number of passes x Road length
 Total hours = (Travel distance ÷ Grader productivity) + (Number of passes x Grader maneuver time)
 For dozer regrading assumes push distance = 3 x road width

Revegetation Calculations

Minimum of 1 acre crew time per area

Safety Berm Volume Calculation

Cross Sectional Area = $\frac{(a+b) \times h}{2}$
 Berm Volume = Berm Length x Cross Sectional Area x No. of Sides



Total berm volume doubled if both sides of road are bermed.
 If length of berm on each side of road is different, input total length of both berms and input 1 for number of sides

**Closure Cost Estimate
Roads**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$12,889	\$52,348	N/A	\$65,237
Cover Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$7,806	\$26,143	N/A	\$33,949
Subtotal Earthworks	\$20,695	\$78,491		\$99,186
Revegetation Cost	\$17,692	\$6,320	\$49,695	\$73,707
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Closure Cost Estimate Roads

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
 Date of Submittal: May 3, 2022
 File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
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 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Roads - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$12,889	\$52,348	N/A	\$65,237
Cover Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$7,806	\$26,143	N/A	\$33,949
Subtotal Earthworks	\$20,695	\$78,491		\$99,186
Revegetation Cost	\$17,692	\$6,320	\$49,695	\$73,707
TOTALS	\$38,387	\$84,811	\$49,695	\$172,893

Roads - Regrading Costs

	Description (required)	Regrading Volume cy	Recontouring Fleet	Fleet Productivity cy/hr	Total Fleet Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	Main Haul Road to Rosemont Pit	43,007	D10R	441	98	\$8,895	\$36,127	\$45,022
2	Spur haul roads to other pits	15,662	D10R	441	36	\$3,268	\$13,271	\$16,539
3	Utility Corridor Access Road - pipe corridor	3,017	D10R	716	4	\$363	\$1,475	\$1,838
4	Utility Corridor Miscellaneous Areas	3,015	D10R	716	4	\$363	\$1,475	\$1,838
		64,701			142	\$12,889	\$52,348	\$65,237

Roads - Growth Media Costs

	Description (required)	Growth Media Volume cy	Growth Media Replacement Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Growth Media Cost \$
1	Main Haul Road to Rosemont Pit						\$0	\$0	\$0
2	Spur haul roads to other pits						\$0	\$0	\$0
3	Utility Corridor Access Road - pipe corridor						\$0	\$0	\$0
4	Utility Corridor Miscellaneous Areas						\$0	\$0	\$0
							\$0	\$0	\$0

Roads - Scarifying/Revegetation Costs

	Description (required)	Total Surface Area acres	Final Slope Length ft	Ripping/ Scarifying Fleet	Ripping Hours hrs	Ripping Labor Costs \$	Ripping Equipment Cost \$	Total Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Main Haul Road to Rosemont Pit	48.03	112.0	D10R	25	\$2,269	\$9,216	\$11,485	\$6,724	\$2,402	\$18,888	\$28,014
2	Spur haul roads to other pits	5.29	112.0	D10R	3	\$272	\$1,106	\$1,378	\$741	\$265	\$2,080	\$3,086
3	Utility Corridor Access Road - pipe corridor	45.66	31.0	D9R	36	\$3,268	\$9,820	\$13,088	\$6,392	\$2,283	\$17,956	\$26,631
4	Utility Corridor Miscellaneous Areas	27.39	52.0	D9R	22	\$1,997	\$6,001	\$7,998	\$3,835	\$1,370	\$10,771	\$15,976
		126.37			86	\$7,806	\$26,143	\$33,949	\$17,692	\$6,320	\$49,695	\$73,707

Closure Cost Estimate

Pits

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Pits - Cost Summary				
	Labor	Equipment	Materials	Totals
Safety Berm Construction Cost	\$0	\$0	N/A	\$0
Safety Berm Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

Closure Cost Estimate Quarries & Borrow Pits

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Waste Rock Dumps - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Safety Berm Construction Cost	\$0	\$0	N/A	\$0
Subtotal Earthwork	\$0	\$0	\$0	\$0
Revegetation Cost	\$0	\$0	\$0	\$0
Safety Berm Revegetation Cost	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

**Closure Cost Estimate
Underground Openings**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Underground Openings Cost Summary				
	Labor	Equipment	Materials	Totals
Adits, Portals & Declines Plugging	\$0	\$0	\$0	\$0
Shaft Backfill/Cover	\$0	\$0	N/A	\$0
Shaft Capping	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

Closure Cost Estimate
Haul Material

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Generic Material Hauling - Cost Summary				
	Labor	Equipment	Materials	Totals
Hauling/Crush/Screen/Compact	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$0	\$0	\$0	\$0
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

Closure Cost Estimate
Foundations & Buildings

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$5,096,577	\$2,998,279	N/A	\$8,094,856
Wall Demolition Cost	\$1,654,444	\$136,160	N/A	\$1,790,604
Slab Demolition	\$43,545	\$151,554	N/A	\$195,099
Subtotal Demolition	\$6,794,566	\$3,285,993	\$0	\$10,080,559
Cover Placement Cost	\$34,947	\$81,756	N/A	\$116,703
Growth Media Placement Cost	\$19,070	\$44,589	N/A	\$63,659
Ripping/Scarifying Cost	\$3,549	\$14,391	N/A	\$17,940
Subtotal Earthworks	\$57,566	\$140,736	\$0	\$198,302
Revegetation Cost	\$6,048	\$2,160	\$7,432	\$15,640
TOTALS	\$6,858,180	\$3,428,889	\$7,432	\$10,294,501

Buildings & Foundation - User Input																			
Facility Description				Physical - MANDATORY										Foundation Cover (1)			Growth Media (1) (entire footprint)		
	Description (required)	ID Code	Type	Length ft	Width ft	Eave Height ft	Slab Thickness in	Foundation Wall Thickness in	Foundation Wall Height ft	Average Flat Area Long Dimension (ripping distance) ft	Building Area Footprint (including surrounding facilities) acres	Foundation Cover Thickness in	Distance from Foundation Cover Borrow Area ft	Slope from Facility to Borrow Area % grade	Growth Media Thickness in	Distance from Growth Media Stockpile ft	Slope from Facility to Stockpile % grade		
1	Field Office		Site Facilities - Buildings	57	57	12	6	0	0	57	0.09	36	500	5.0	12	500	5.0		
2	Gatehouse		Site Facilities - Buildings	19	19	12	6	0	0	19	0.01	36	500	5.0	12	500	5.0		
3	Administration/Mine Offices		Site Facilities - Buildings	101	101	12	6	0	0	101	0.29	36	500	5.0	12	500	5.0		
4	Change House		Site Facilities - Buildings	57	57	12	6	0	0	57	0.09	36	500	5.0	12	500	5.0		
5	Laboratory		Site Facilities - Buildings	57	57	12	6	0	0	57	0.09	36	500	5.0	12	500	5.0		
6	Main Warehouse		Site Facilities - Buildings	141	141	30	12	6	3	141	0.57	36	500	5.0	12	500	5.0		
7	Plant Maintenance		Site Facilities - Buildings	78	78	20	12	6	3	78	0.17	36	500	5.0	12	500	5.0		
8	Plant Offices/Change House		Site Facilities - Buildings	78	78	20	12	0	0	78	0.17	36	500	5.0	12	500	5.0		
9	Truck Shop		Site Facilities - Buildings	195	195	60	12	6	3	195	1.09	36	500	5.0	12	500	5.0		
10	Truck Wash		Site Facilities - Buildings	95	95	60	12	6	3	95	0.26	36	500	5.0	12	500	5.0		
11	Fresh/Fire Water Tank		Other Facilities	20	20	20	12	0	0	20	0.01	36	500	5.0	12	500	5.0		
12	Potable Water Tank		Other Facilities	20	20	20	12	0	0	20	0.01	36	500	5.0	12	500	5.0		
13	Blasting Magazine		Site Facilities - Buildings	21	21	16	6	6	8	21	0.01	36	500	5.0	12	500	5.0		
14	Oxide Primary Crusher		Process - Crushing & Screening	85	85	60	12	12	3	85	0.21	36	500	5.0	12	500	5.0		
15	Oxide Secondary Crusher		Process - Crushing & Screening	65	65	40	12	12	3	65	0.12	36	500	5.0	12	500	5.0		
16	Oxide Conveyor Transfer Point/Agglomerator		Process - Other	30	30	40	12	6	3	30	0.03	36	500	5.0	12	500	5.0		
17	Sulfide Primary Crusher		Process - Crushing & Screening	89	89	60	12	12	3	89	0.23	36	500	5.0	12	500	5.0		
18	Sulfide Grinding Circuit (SAG /Ball Mills/Pebble Crusher)		Process - Crushing & Screening	198	198	100	12	6	3	198	1.13	36	500	5.0	12	500	5.0		
19	Copper Flotation		Process - Plant & Buildings	145	145	30	12	6	3	145	0.60	36	500	5.0	12	500	5.0		
20	Molybdenum (Moly) Flotation		Process - Plant & Buildings	65	65	30	12	6	3	65	0.12	36	500	5.0	12	500	5.0		
21	Reagent Storage (flotation)		Process - Plant & Buildings	84	84	30	12	6	3	84	0.20	36	500	5.0	12	500	5.0		
22	Bulk Cu/Mo Thickener		Process - Other	92	92	30	12	12	10	92	0.24	36	500	5.0	12	500	5.0		
23	Copper Concentrate Thickening, Filtering and Loadout		Process - Other	204	204	30	12	6	3	204	1.19	36	500	5.0	12	500	5.0		
24	Tailings Thickener (2 thickeners)		Process - Other	207	207	0	12	12	10	207	1.23	36	500	5.0	12	500	5.0		
25	Flocculant Plant (tailings)		Process - Plant & Buildings	31	31	30	12	6	3	31	0.03	36	500	5.0	12	500	5.0		
26	Albion Process Acid Leach		Process - Plant & Buildings	145	145	30	12	6	3	145	0.60	36	500	5.0	12	500	5.0		
27	Albion Process Fine Grinding		Process - Crushing & Screening	84	84	30	12	6	3	84	0.20	36	500	5.0	12	500	5.0		
28	Albion Process Iron Control		Process - Plant & Buildings	118	118	10	12	6	3	118	0.40	36	500	5.0	12	500	5.0		
29	Albion Process Desulfurization and Burner		Process - Plant & Buildings	118	118	30	12	6	3	118	0.40	36	500	5.0	12	500	5.0		
30	Albion Process Iron Control and Sulfur Filtration		Process - Plant & Buildings	84	84	30	12	6	3	84	0.20	36	500	5.0	12	500	5.0		
31	Flocculant Plant (Albion Plant)		Process - Plant & Buildings	31	31	30	12	6	3	31	0.03	36	500	5.0	12	500	5.0		
32	Solvent Extraction Plant		Process - Plant & Buildings	276	276	30	12	6	3	276	2.19	36	500	5.0	12	500	5.0		
33	Electrowinning Plant (Albion)		Process - Plant & Buildings	219	219	30	12	6	3	219	1.38	36	500	5.0	12	500	5.0		
34	Electrowinning Plant (Oxide)		Process - Plant & Buildings	219	219	30	12	6	3	219	1.38	36	500	5.0	12	500	5.0		
35	SX-EW Reagent Storage (2 areas)		Process - Plant & Buildings	105	105	30	12	6	3	105	0.32	36	500	5.0	12	500	5.0		
36	Limestone Grinding Plant/Lime Plant		Process - Crushing & Screening	31	31	30	12	6	3	31	0.03	36	500	5.0	12	500	5.0		
37	Gold-Silver Leach Plant		Process - Plant & Buildings	84	84	30	12	6	3	84	0.20	36	500	5.0	12	500	5.0		
38	Acid Plant		Process - Plant & Buildings	300	300	40	12	6	3	300	2.58	36	500	5.0	12	500	5.0		
39	Oxygen Plant (2 plants)		Process - Other	20	20	30	12	6	3	20	0.01	36	500	5.0	12	500	5.0		
40																			
41																			
42																			
43																			
44																			

- Notes:
- Foundation cover only calculated to cover slab. Growth media estimated over entire footprint area
 - If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
 - Growth media assumed stockpiled adjacent to plant site area.

Closure Cost Estimate
Foundations & Buildings

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
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Growth Media Placement Cost	\$19,070	\$44,589	N/A	\$63,659
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Revegetation Cost	\$6,048	\$2,160	\$7,432	\$15,640
TOTALS	\$6,858,180	\$3,428,889	\$7,432	\$10,294,501

Buildings & Foundation - User Input (cont.)																
You must fill in ALL green cells and relevant blue cells in this section for each building or facility																
Description (required)	Construction Materials			Slab Demolition		Foundation Cover			Growth Media			Revegetation				
	Building Type (select)	Foundation Type (select)	Wall Type (select)	Slab Demo Method (select)	Slab Breaking Equipment Fleet (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Ripping Fleet (select)
1 Field Office	Sm. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
2 Gatehouse	Sm. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
3 Administration/Mine Offices	Sm. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
4 Change House	Sm. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
5 Laboratory	Sm. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
6 Main Warehouse	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
7 Plant Maintenance	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
8 Plant Offices/Change House	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
9 Truck Shop	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
10 Truck Wash	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
11 Fresh/Fire Water Tank	Sm. steel	Conc 12 in (300 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
12 Potable Water Tank	Sm. steel	Conc 12 in (300 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
13 Blasting Magazine	Sm. concrete	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
14 Oxide Primary Crusher	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
15 Oxide Secondary Crusher	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
16 Oxide Conveyor Transfer Point/Agglomerator	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
17 Sulfide Primary Crusher	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
18 Sulfide Grinding Circuit (SAG /Ball Mills/Pebble Crusher)	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
19 Copper Flotation	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
20 Molybdenum (Moly) Flotation	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
21 Reagent Storage (flotation)	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
22 Bulk Cu/Mo Thickener	Lg. concrete	Conc 12 in (300 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
23 Copper Concentrate Thickening, Filtering and Loadout	Lg. concrete	Conc 12 in (300 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
24 Tailings Thickener (2 thickeners)	Lg. concrete	Conc 12 in (300 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
25 Flocculant Plant (tailings)	Sm. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
26 Albion Process Acid Leach	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
27 Albion Process Fine Grinding	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
28 Albion Process Iron Control	Sm. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
29 Albion Process Desulfurization and Burner	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
30 Albion Process Iron Control and Sulfur Filtration	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
31 Flocculant Plant (Albion Plant)	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
32 Solvent Extraction Plant	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
33 Electrowinning Plant (Albion)	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
34 Electrowinning Plant (Oxide)	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
35 SX-EW Reagent Storage (2 areas)	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
36 Limestone Grinding Plant/Line Plant	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
37 Gold-Silver Leach Plant	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
38 Acid Plant	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
39 Oxygen Plant (2 plants)	Lg. steel	Conc 6 in (150 mm) thick		Break & bury	Lg Excavator	Alluvium	Large Truck		Alluvium	Large Truck		Mix 4	None	None	Yes	Large Dozer
40																
41																
42																
43																
44																

Notes:
1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Closure Cost Estimate
Foundations & Buildings

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
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TOTALS	\$6,858,180	\$3,428,889	\$7,432	\$10,294,501

Buildings & Foundation - Calculations

Building Volume Calculations

Using Means Heavy Construction Cost Data (2004) calculates cubic feet from building dimensions
Estimate slab thickness and wall thickness if not known
Assumes that all concrete slabs are reinforced
Productivity for crew from Means Heavy Construction Cost Data (2004) adjusted for supervision
(addressed in Misc. Costs) and Davis-Bacon Wage Rates
Demolition costs do not include hauling or disposing if debris - Use Waste Disposal module

Slab Demolition Calculations

Minimum 1 hr excavator time for slab demolition

Cover Volume Calculation

Foundation area x cover thickness
If "Bury in Place" is selected as slab demolition method, cover thickness is adjusted such that
total cover (cover + growth media) equals value entered in "Minimum thickness of cover over unbroken slab" cell above

Ripping/Scarifying Calculations

Flat area width = Final flat area + Average long dimensions
Number of passes = Flat area width + Grader width
Travel distance = Number of passes x Average long dimensions
Total hours = (Travel distance + Grader productivity) + (Number of passes x Grader maneuver time)

Revegetation

Minimum 1 acre revegetation crew time per area

Closure Cost Estimate
Foundations & Buildings

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$5,096,577	\$2,998,279	N/A	\$8,094,856
Wall Demolition Cost	\$1,654,444	\$136,160	N/A	\$1,790,604
Slab Demolition	\$43,545	\$151,554	N/A	\$195,099
Subtotal Demolition	\$6,794,566	\$3,285,993	\$0	\$10,080,559
Cover Placement Cost	\$34,947	\$81,756	N/A	\$116,703
Growth Media Placement Cost	\$19,070	\$44,589	N/A	\$63,659
Ripping/Scarifying Cost	\$3,549	\$14,391	N/A	\$17,940
Subtotal Earthworks	\$57,566	\$140,736	\$0	\$198,302
Revegetation Cost	\$6,048	\$2,160	\$7,432	\$15,640
TOTALS	\$6,858,180	\$3,428,889	\$7,432	\$10,294,501

Building & Foundation Demolition Costs																		
Uses RS Means Heavy Construction Cost Data for building and wall demolition cost calculations. Uses CAT Handbook for slab breaking production.																		
Description (required)	Building Footprint (slab area) sqft	Building Volume cu ft	Wall Length ft	Wall Area sq ft	Slab Demolition Fleet	Slab Volume cy	Building Demolition			Wall Demolition			Slab Demolition			Total Costs		
							Total Labor Cost \$	Total Equipment Cost \$	Total Building Demolition Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Wall Demolition Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Slab Breaking Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Demolition Costs \$
1 Field Office	3,249	38,988	228	0	385BL	7	\$10,527	\$5,458	\$15,985	\$0	\$0	\$0	\$181	\$630	\$811	\$10,708	\$6,088	\$16,796
2 Gatehouse	361	4,332	76	0	385BL	7	\$1,170	\$606	\$1,776	\$0	\$0	\$0	\$181	\$630	\$811	\$1,351	\$1,236	\$2,587
3 Administration/Mine Offices	10,201	122,412	404	0	385BL	189	\$33,051	\$17,138	\$50,189	\$0	\$0	\$0	\$348	\$1,197	\$1,545	\$33,395	\$19,335	\$51,730
4 Change House	3,249	38,988	228	0	385BL	60	\$10,527	\$5,458	\$15,985	\$0	\$0	\$0	\$181	\$630	\$811	\$10,708	\$6,088	\$16,796
5 Laboratory	3,249	38,988	228	0	385BL	60	\$10,527	\$5,458	\$15,985	\$0	\$0	\$0	\$181	\$630	\$811	\$10,708	\$6,088	\$16,796
6 Main Warehouse	19,881	596,430	564	1,692	385BL	736	\$131,215	\$77,536	\$208,751	\$45,633	\$3,756	\$49,389	\$1,339	\$4,661	\$6,000	\$178,187	\$85,953	\$264,140
7 Plant Maintenance	6,084	121,680	312	936	385BL	225	\$26,770	\$15,818	\$42,588	\$25,244	\$2,078	\$27,322	\$416	\$1,449	\$1,865	\$52,430	\$19,345	\$71,775
8 Plant Offices/Change House	6,084	121,680	312	0	385BL	225	\$26,770	\$15,818	\$42,588	\$0	\$0	\$0	\$416	\$1,449	\$1,865	\$27,186	\$17,267	\$44,453
9 Truck Shop	38,025	2,281,500	780	2,340	385BL	1,408	\$501,930	\$296,595	\$798,525	\$63,110	\$5,195	\$68,305	\$2,570	\$8,944	\$11,514	\$567,610	\$310,734	\$878,344
10 Truck Wash	9,025	541,500	380	1,140	385BL	334	\$119,130	\$70,395	\$189,525	\$30,746	\$2,531	\$33,277	\$615	\$2,142	\$2,757	\$150,491	\$75,068	\$225,559
11 Fresh/Fire Water Tank	400	6,000	80	0	385BL	15	\$2,160	\$1,120	\$3,280	\$0	\$0	\$0	\$181	\$630	\$811	\$2,341	\$1,750	\$4,091
12 Potable Water Tank	400	6,000	80	0	385BL	15	\$2,160	\$1,120	\$3,280	\$0	\$0	\$0	\$181	\$630	\$811	\$2,341	\$1,750	\$4,091
13 Blasting Magazine	441	7,056	84	672	385BL	8	\$2,470	\$1,270	\$3,740	\$18,124	\$1,492	\$19,616	\$181	\$630	\$811	\$20,775	\$3,392	\$24,167
14 Oxide Primary Crusher	7,225	433,500	340	1,020	385BL	268	\$95,370	\$56,355	\$151,725	\$27,509	\$2,264	\$29,773	\$489	\$1,701	\$2,190	\$123,368	\$60,320	\$183,688
15 Oxide Secondary Crusher	4,225	169,000	260	780	385BL	156	\$37,180	\$21,970	\$59,150	\$21,037	\$1,732	\$22,769	\$290	\$1,008	\$1,298	\$56,507	\$24,710	\$81,217
16 Oxide Conveyor Transfer Point/Agglomerator	900	36,000	120	360	385BL	33	\$7,920	\$4,680	\$12,600	\$9,709	\$799	\$10,508	\$181	\$630	\$811	\$17,810	\$6,109	\$23,919
17 Sulfide Primary Crusher	7,921	475,260	356	1,068	385BL	293	\$104,557	\$61,784	\$166,341	\$28,804	\$2,371	\$31,175	\$543	\$1,890	\$2,433	\$133,904	\$66,405	\$199,949
18 Sulfide Grinding Circuit (SAG /Ball Mills/Pebble Crusher)	39,204	3,920,400	792	2,376	385BL	1,452	\$662,488	\$509,652	\$1,172,140	\$64,081	\$5,275	\$69,356	\$2,660	\$9,259	\$11,919	\$629,229	\$524,186	\$1,153,415
19 Copper Flotation	21,025	630,750	580	1,740	385BL	779	\$138,765	\$81,998	\$220,763	\$46,628	\$3,863	\$50,491	\$1,430	\$4,976	\$6,406	\$187,123	\$90,837	\$277,960
20 Molybdenum (Moly) Flotation	4,225	126,750	260	780	385BL	156	\$27,885	\$16,478	\$44,363	\$27,037	\$1,732	\$22,769	\$290	\$1,008	\$1,298	\$49,212	\$19,218	\$68,430
21 Reagent Storage (flotation)	7,056	211,680	336	1,008	385BL	261	\$46,570	\$27,518	\$74,088	\$27,186	\$2,238	\$29,424	\$471	\$1,638	\$2,109	\$74,227	\$31,394	\$105,621
22 Bulk Cu/Mo Thickener	8,464	253,920	368	3,680	385BL	313	\$78,715	\$45,706	\$124,421	\$158,792	\$13,064	\$171,856	\$579	\$2,016	\$2,595	\$238,086	\$60,786	\$298,872
23 Copper Concentrate Thickening, Filtering and Loadout	41,616	1,248,480	616	2,448	385BL	1,541	\$387,029	\$224,726	\$611,755	\$105,631	\$8,690	\$114,321	\$2,823	\$9,826	\$12,649	\$495,483	\$243,242	\$738,725
24 Tailings Thickener (2 thickeners)	42,849	0	828	8,280	385BL	1,587	\$0	\$0	\$0	\$357,282	\$29,394	\$386,676	\$2,896	\$10,078	\$12,974	\$360,178	\$39,472	\$399,650
25 Flocculant Plant (tailings)	961	28,830	124	372	385BL	36	\$7,784	\$4,036	\$11,820	\$10,033	\$826	\$10,859	\$181	\$630	\$811	\$17,998	\$5,492	\$23,490
26 Albion Process Acid Leach	21,025	630,750	580	1,740	385BL	779	\$138,765	\$81,998	\$220,763	\$46,628	\$3,863	\$50,491	\$1,430	\$4,976	\$6,406	\$187,123	\$90,837	\$277,960
27 Albion Process Fine Grinding	7,056	211,680	336	1,008	385BL	261	\$46,570	\$27,518	\$74,088	\$27,186	\$2,238	\$29,424	\$471	\$1,638	\$2,109	\$74,227	\$31,394	\$105,621
28 Albion Process Iron Control	13,924	139,240	472	1,416	385BL	516	\$37,595	\$19,494	\$57,089	\$38,190	\$3,144	\$41,334	\$941	\$3,275	\$4,216	\$76,726	\$25,913	\$102,639
29 Albion Process Desulfurization and Burner	13,924	417,720	472	1,416	385BL	516	\$91,888	\$54,304	\$146,202	\$38,190	\$3,144	\$41,334	\$941	\$3,275	\$4,216	\$131,029	\$60,723	\$191,752
30 Albion Process Iron Control and Sulfur Filtration	7,056	211,680	336	1,008	385BL	261	\$46,570	\$27,518	\$74,088	\$27,186	\$2,238	\$29,424	\$471	\$1,638	\$2,109	\$74,227	\$31,394	\$105,621
31 Flocculant Plant (Albion Plant)	961	28,830	124	372	385BL	36	\$6,343	\$3,748	\$10,091	\$10,033	\$826	\$10,859	\$181	\$630	\$811	\$16,557	\$5,204	\$21,761
32 Solvent Extraction Plant	76,176	2,285,280	1,104	3,312	385BL	2,821	\$502,762	\$297,086	\$799,848	\$89,325	\$7,353	\$96,678	\$5,158	\$17,952	\$23,110	\$597,245	\$322,391	\$919,636
33 Electrowinning Plant (Albion)	47,961	1,438,830	876	2,628	385BL	1,776	\$316,543	\$187,048	\$503,591	\$70,877	\$5,834	\$76,711	\$3,239	\$11,275	\$14,514	\$390,659	\$204,157	\$594,816
34 Electrowinning Plant (Oxide)	47,961	1,438,830	876	2,628	385BL	1,776	\$316,543	\$187,048	\$503,591	\$70,877	\$5,834	\$76,711	\$3,239	\$11,275	\$14,514	\$390,659	\$204,157	\$594,816
35 SX-EW Reagent Storage (2 areas)	11,025	330,750	420	1,260	385BL	408	\$72,765	\$42,998	\$115,763	\$33,982	\$2,797	\$36,779	\$742	\$2,583	\$3,325	\$107,489	\$48,378	\$155,867
36 Limestone Grinding Plant/Lime Plant	961	28,830	124	372	385BL	36	\$6,343	\$3,748	\$10,091	\$10,033	\$826	\$10,859	\$181	\$630	\$811	\$16,557	\$5,204	\$21,761
37 Gold-Silver Leach Plant	7,056	211,680	336	1,008	385BL	261	\$46,570	\$27,518	\$74,088	\$27,186	\$2,238	\$29,424	\$471	\$1,638	\$2,109	\$74,227	\$31,394	\$105,621
38 Acid Plant	90,000	3,600,000	1,200	3,600	385BL	3,333	\$792,000	\$468,000	\$1,260,000	\$97,092	\$7,992	\$105,084	\$6,099	\$21,227	\$27,326	\$895,191	\$497,219	\$1,392,410
39 Oxygen Plant (2 plants)	400	12,000	80	240	385BL	15	\$2,640	\$1,560	\$4,200	\$6,473	\$533	\$7,006	\$181	\$630	\$811	\$9,294	\$2,723	\$12,017
40							\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41							\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
42							\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43							\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
44							\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
		22,450,224				23,012	\$5,096,577	\$2,998,279	\$8,094,856	\$1,654,444	\$136,160	\$1,790,604	\$43,548	\$151,554	\$195,099	\$6,794,566	\$3,285,993	\$10,080,559

Closure Cost Estimate
Foundations & Buildings

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$5,096,577	\$2,998,279	N/A	\$8,094,856
Wall Demolition Cost	\$1,654,444	\$136,160	N/A	\$1,790,604
Slab Demolition	\$43,545	\$151,554	N/A	\$195,099
Subtotal Demolition	\$6,794,566	\$3,285,993	\$0	\$10,080,559
Cover Placement Cost	\$34,947	\$81,756	N/A	\$116,703
Growth Media Placement Cost	\$19,070	\$44,589	N/A	\$63,659
Ripping/Scarifying Cost	\$3,549	\$14,391	N/A	\$17,940
Subtotal Earthworks	\$57,566	\$140,736	\$0	\$198,302
Revegetation Cost	\$6,048	\$2,160	\$7,432	\$15,640
TOTALS	\$6,858,180	\$3,428,889	\$7,432	\$10,294,501

Building & Foundation - Foundation Cover and Growth Media Costs																				
		Foundation Cover								Growth Media								Total Cover & Growth Media Costs		
	Description (required)	Cover Volume cy	Cover Replacement Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Cost \$	Growth Media Volume cy	Growth Media Replacement Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Growth Media Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Costs \$
1	Field Office	361	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	150	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
2	Gatehouse	40	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	17	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
3	Administration/Mine Offices	1,133	769D/988G/D7R	684	2	2	\$635	\$1,487	\$2,122	472	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$953	\$2,230	\$3,183
4	Change House	361	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	150	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
5	Laboratory	361	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	150	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
6	Main Warehouse	2,209	769D/988G/D7R	684	2	3	\$953	\$2,230	\$3,183	920	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$1,271	\$2,973	\$4,244
7	Plant Maintenance	676	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	282	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
8	Plant Offices/Change House	676	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	282	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
9	Truck Shop	4,225	769D/988G/D7R	684	2	6	\$1,906	\$4,460	\$6,366	1,760	769D/988G/D7R	684	2	3	\$953	\$2,230	\$3,183	\$2,859	\$6,090	\$9,549
10	Truck Wash	1,003	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	418	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
11	Fresh/Fire Water Tank	44	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	19	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
12	Potable Water Tank	44	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	19	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
13	Blasting Magazine	49	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	20	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
14	Oxide Primary Crusher	803	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	334	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
15	Oxide Secondary Crusher	469	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	196	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
16	Oxide Conveyor Transfer Point/Agglomerator	100	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	42	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
17	Sulfide Primary Crusher	880	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	367	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
18	Sulfide Grinding Circuit (SAG /Ball Mills/Pebble Crusher)	4,356	769D/988G/D7R	684	2	8	\$1,906	\$4,460	\$6,366	1,615	769D/988G/D7R	684	2	3	\$953	\$2,230	\$3,183	\$2,859	\$6,090	\$9,549
19	Copper Flotation	2,336	769D/988G/D7R	684	2	3	\$953	\$2,230	\$3,183	973	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$1,271	\$2,973	\$4,244
20	Molybdenum (Moly) Flotation	469	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	196	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
21	Reagent Storage (flotation)	784	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	327	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
22	Bulk Cu/Mo Thickener	940	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	392	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
23	Copper Concentrate Thickening, Filtering and Loadout	4,624	769D/988G/D7R	684	2	7	\$2,223	\$5,203	\$7,426	1,927	769D/988G/D7R	684	2	3	\$953	\$2,230	\$3,183	\$3,176	\$7,433	\$10,609
24	Tailings Thickener (2 thickeners)	4,761	769D/988G/D7R	684	2	7	\$2,223	\$5,203	\$7,426	1,984	769D/988G/D7R	684	2	3	\$953	\$2,230	\$3,183	\$3,176	\$7,433	\$10,609
25	Flocculant Plant (tailings)	107	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	44	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
26	Albion Process Acid Leach	2,336	769D/988G/D7R	684	2	3	\$953	\$2,230	\$3,183	973	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$1,271	\$2,973	\$4,244
27	Albion Process Fine Grinding	784	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	327	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
28	Albion Process Iron Control	1,547	769D/988G/D7R	684	2	2	\$635	\$1,487	\$2,122	645	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$953	\$2,230	\$3,183
29	Albion Process Desulfurization and Burner	1,547	769D/988G/D7R	684	2	2	\$635	\$1,487	\$2,122	645	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$953	\$2,230	\$3,183
30	Albion Process Iron Control and Sulfur Filtration	784	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	327	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
31	Flocculant Plant (Albion Plant)	107	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	44	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
32	Solvent Extraction Plant	8,464	769D/988G/D7R	684	2	12	\$3,812	\$8,919	\$12,731	3,527	769D/988G/D7R	684	2	5	\$1,588	\$3,716	\$5,304	\$5,400	\$12,635	\$18,035
33	Electrowinning Plant (Albion)	5,329	769D/988G/D7R	684	2	8	\$2,541	\$5,946	\$8,487	2,220	769D/988G/D7R	684	2	3	\$953	\$2,230	\$3,183	\$3,494	\$8,176	\$11,670
34	Electrowinning Plant (Oxide)	5,329	769D/988G/D7R	684	2	8	\$2,541	\$5,946	\$8,487	2,220	769D/988G/D7R	684	2	3	\$953	\$2,230	\$3,183	\$3,494	\$8,176	\$11,670
35	SX-EW Reagent Storage (2 areas)	1,225	769D/988G/D7R	684	2	2	\$635	\$1,487	\$2,122	310	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$953	\$2,230	\$3,183
36	Limestone Grinding Plant/Line Plant	107	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	44	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
37	Gold-Silver Leach Plant	784	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	327	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
38	Acid Plant	10,000	769D/988G/D7R	684	2	15	\$4,764	\$11,149	\$15,913	4,167	769D/988G/D7R	684	2	6	\$1,906	\$4,460	\$6,366	\$6,670	\$15,609	\$22,279
39	Oxygen Plant (2 plants)	44	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	19	769D/988G/D7R	684	2	1	\$318	\$743	\$1,061	\$636	\$1,486	\$2,122
40							\$0	\$0	\$0						\$0	\$0	\$0	\$0	\$0	\$0
41							\$0	\$0	\$0						\$0	\$0	\$0	\$0	\$0	\$0
42							\$0	\$0	\$0						\$0	\$0	\$0	\$0	\$0	\$0
43							\$0	\$0	\$0						\$0	\$0	\$0	\$0	\$0	\$0
44							\$0	\$0	\$0						\$0	\$0	\$0	\$0	\$0	\$0
		70,198				110	\$34,947	\$81,756	\$116,703	29,251				60	\$19,070	\$44,589	\$63,659	\$54,017	\$126,345	\$180,362

Closure Cost Estimate
Foundations & Buildings

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Buildings & Foundation Demolition Cost Summary				
	Labor	Equipment	Materials	Totals
Building Demolition Cost	\$5,096,577	\$2,998,279	N/A	\$8,094,856
Wall Demolition Cost	\$1,654,444	\$136,160	N/A	\$1,790,604
Slab Demolition	\$43,545	\$151,554	N/A	\$195,099
Subtotal Demolition	\$6,794,566	\$3,285,993	\$0	\$10,080,559
Cover Placement Cost	\$34,947	\$81,756	N/A	\$116,703
Growth Media Placement Cost	\$19,070	\$44,589	N/A	\$63,659
Ripping/Scarifying Cost	\$3,549	\$14,391	N/A	\$17,940
Subtotal Earthworks	\$57,566	\$140,736	\$0	\$198,302
Revegetation Cost	\$6,048	\$2,160	\$7,432	\$15,640
TOTALS	\$6,858,180	\$3,428,889	\$7,432	\$10,294,501

Building & Foundation - Scarifying/Revegetation Costs																
				Scarifying/Ripping				Revegetation				Total Scarify & Revegetation Costs				
	Description (required)	Flat Area acres	Ripping/ Scarifying Fleet	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Costs \$	
1	Field Office	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
2	Gatehouse	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
3	Administration/Mine Offices	0.30	D10R	1	\$91	\$369	\$460	\$140	\$50	\$118	\$308	\$231	\$419	\$118	\$768	
4	Change House	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
5	Laboratory	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
6	Main Warehouse	0.60	D10R	1	\$91	\$369	\$460	\$140	\$50	\$236	\$426	\$231	\$419	\$236	\$886	
7	Plant Maintenance	0.20	D10R	1	\$91	\$369	\$460	\$140	\$50	\$79	\$269	\$231	\$419	\$79	\$729	
8	Plant Offices/Change House	0.20	D10R	1	\$91	\$369	\$460	\$140	\$50	\$79	\$269	\$231	\$419	\$79	\$729	
9	Truck Shop	1.10	D10R	1	\$91	\$369	\$460	\$154	\$55	\$433	\$642	\$245	\$424	\$433	\$1,102	
10	Truck Wash	0.30	D10R	1	\$91	\$369	\$460	\$140	\$50	\$118	\$308	\$231	\$419	\$118	\$768	
11	Fresh/Fire Water Tank	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
12	Potable Water Tank	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
13	Blasting Magazine	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
14	Oxide Primary Crusher	0.20	D10R	1	\$91	\$369	\$460	\$140	\$50	\$79	\$269	\$231	\$419	\$79	\$729	
15	Oxide Secondary Crusher	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
16	Oxide Conveyor Transfer Point/Agglomerator	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
17	Sulfide Primary Crusher	0.20	D10R	1	\$91	\$369	\$460	\$140	\$50	\$79	\$269	\$231	\$419	\$79	\$729	
18	Sulfide Grinding Circuit (SAG /Ball Mills/Pebble Crusher)	1.10	D10R	1	\$91	\$369	\$460	\$154	\$55	\$433	\$642	\$245	\$424	\$433	\$1,102	
19	Copper Flotation	0.80	D10R	1	\$91	\$369	\$460	\$140	\$50	\$236	\$426	\$231	\$419	\$236	\$886	
20	Molybdenum (Moly) Flotation	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
21	Reagent Storage (flotation)	0.20	D10R	1	\$91	\$369	\$460	\$140	\$50	\$79	\$269	\$231	\$419	\$79	\$729	
22	Bulk Cu/Mo Thickener	0.20	D10R	1	\$91	\$369	\$460	\$140	\$50	\$79	\$269	\$231	\$419	\$79	\$729	
23	Copper Concentrate Thickening, Filtering and Loadout	1.20	D10R	1	\$91	\$369	\$460	\$168	\$60	\$472	\$700	\$259	\$429	\$472	\$1,160	
24	Tailings Thickener (2 thickeners)	1.20	D10R	1	\$91	\$369	\$460	\$168	\$60	\$472	\$700	\$259	\$429	\$472	\$1,160	
25	Flocculant Plant (tailings)	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
26	Albion Process Acid Leach	0.80	D10R	1	\$91	\$369	\$460	\$140	\$50	\$236	\$426	\$231	\$419	\$236	\$886	
27	Albion Process Fine Grinding	0.20	D10R	1	\$91	\$369	\$460	\$140	\$50	\$79	\$269	\$231	\$419	\$79	\$729	
28	Albion Process Iron Control	0.40	D10R	1	\$91	\$369	\$460	\$140	\$50	\$157	\$347	\$231	\$419	\$157	\$807	
29	Albion Process Desulfurization and Burner	0.40	D10R	1	\$91	\$369	\$460	\$140	\$50	\$157	\$347	\$231	\$419	\$157	\$807	
30	Albion Process Iron Control and Sulfur Filtration	0.20	D10R	1	\$91	\$369	\$460	\$140	\$50	\$79	\$269	\$231	\$419	\$79	\$729	
31	Flocculant Plant (Albion Plant)	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
32	Solvent Extraction Plant	2.20	D10R	1	\$91	\$369	\$460	\$308	\$110	\$865	\$1,283	\$399	\$479	\$865	\$1,743	
33	Electrowinning Plant (Albion)	1.40	D10R	1	\$91	\$369	\$460	\$196	\$70	\$551	\$817	\$287	\$439	\$551	\$1,277	
34	Electrowinning Plant (Oxide)	1.40	D10R	1	\$91	\$369	\$460	\$196	\$70	\$551	\$817	\$287	\$439	\$551	\$1,277	
35	SX-EW Reagent Storage (2 areas)	0.30	D10R	1	\$91	\$369	\$460	\$140	\$50	\$118	\$308	\$231	\$419	\$118	\$768	
36	Limestone Grinding Plant/Line Plant	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
37	Gold-Silver Leach Plant	0.20	D10R	1	\$91	\$369	\$460	\$140	\$50	\$79	\$269	\$231	\$419	\$79	\$729	
38	Acid Plant	2.80	D10R	1	\$91	\$369	\$460	\$364	\$130	\$1,022	\$1,516	\$455	\$499	\$1,022	\$1,976	
39	Oxygen Plant (2 plants)	0.10	D10R	1	\$91	\$369	\$460	\$140	\$50	\$39	\$229	\$231	\$419	\$39	\$689	
40					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
41					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
42					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
43					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
44					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		18.90		39	\$3,549	\$14,391	\$17,940	\$6,048	\$2,160	\$7,432	\$15,640	\$9,597	\$16,551	\$7,432	\$33,580	

**Closure Cost Estimate
Other Demo & Equip Removal**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Other Demolition and Equipment Removal - Cost Summary				
	Labor	Equipment	Materials	Totals
Other Demolition	\$82,472	\$78,560	\$18,428	\$179,460
Equipment Removal	\$0	\$0	\$0	\$0
TOTALS	\$82,472	\$78,560	\$18,428	\$179,460

Other Demolition									
Facility Description									
	Description (required)	ID Code	Type	Quantity	Units	Labor Unit Cost \$	Equipment Unit Cost \$	Material Unit Cost \$	Total Cost \$
1	Removal of FWDS Pump Station #1 and #2		Site Facilities - Buildings	2	EA	\$30,849.60	\$27,038.80	\$5,000.00	\$125,777.77
2	Abandon Tailings Pipeline In Place		Site Facilities - Structures	1	LS	\$20,773.20	\$24,482.00	\$8,428.00	\$53,683.20
						\$82,472	\$78,560	\$18,428	\$179,460

Notes: 1. Pump station demolition assumes Demo Crews B-3 and medium concrete breaking crew for 40 hours for each pump station.
2. 24-inch diameter tailings pipeline under BLM property (~1700 linear feet) abandoned in place and filled with grout
3. Grout cost at \$42.14/cy. Total of ~200 cy required.
4. Assume B22A pipe crew and Grout Crew for 40 hour for pipeline abandonment.
5. Scarifying and seeding disturbed areas covered under other items.

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRC_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$4,690	\$12,523	N/A	\$17,213
Diversion Ditch Liner	\$0	\$0	\$0	\$0
Diversion Ditch Rip-Rap	\$231,526	\$43,187	\$128,128	\$402,841
Sed Pond Construct/Regrade	\$2,725	\$11,060	N/A	\$13,785
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$2,715	\$7,415	N/A	\$10,130
Ripping/Scarifying Cost	\$455	\$1,845	N/A	\$2,300
Subtotal Earthworks	\$242,111	\$76,030	\$128,128	\$446,269
Diversion Ditch Revegetation	\$1,890	\$675	\$5,309	\$7,874
Sediment Pond Revegetation	\$770	\$275	\$2,165	\$3,210
Subtotal Revegetation	\$2,660	\$950	\$7,474	\$11,084
TOTALS	\$244,771	\$76,980	\$135,602	\$457,353

Diversion Ditches - User Input																
			Diversion Ditches							Revegetation			Liner and Rip-Rap Installation			
	Description (required)	ID Code	Diversion Length ft	Diversion Depth ft	Ditch Bottom Width ft	Ditch Sideslope Angle H:1V	Excavate Volume (if calculated elsewhere) cy	Excavating Material Condition (select)	Excavating Equipment Fleet (select)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Liner Area S.Y.	Liner Type (select)	Rip-Rap Area S.Y.	Rip-Rap Type (select type)
1	Stormwater Ditch - no riprap		24000	3.0	6.0	2.0		1	Large	Mix 4	None	None	0		0	
2	Stormwater Ditch - rip rap lined		6350	3.0	6.0	2.0		1	Large	Mix 4	None	None	0		8,960	Gabions, 12 in (3)

Notes:

1. Stormwater ditches and ponds for waste rock and plant site areas
2. Riprap assumes bottom and sides of ditch covered
3. Diversion ditches for areas not included in APP

Sediment/Evaporation Pond Construction/Removal - User Input													
			Sediment Ponds							Growth Media			
	Description (required)	ID Code	Pond Width ft	Pond/Berm Length ft	Berm Height ft	Crest Width ft	Sideslope Angle H:1V	Final Area (if calculated elsewhere) acres	Regrade Volume (if calculated elsewhere) cy	Cover Volume (if calculated elsewhere) cy	Growth Media Thickness in	Distance from Growth Media Stockpile ft	Slope from Pond to Borrow % grade
1	Retention Pond 1		100	300	10.0	17.0	2.0				12	500	5.0
2	Retention Pond 2		100	300	10.0	17.0	2.0				12	500	5.0
3	Retention Pond 3		100	300	10.0	17.0	2.0				12	500	5.0
4	Retention Pond 4		100	300	10.0	17.0	2.0				12	500	5.0
5	Retention Pond 5		100	300	10.0	17.0	2.0				12	500	5.0

Notes:

1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
3. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table
4. Berm dimensions assume all material removed for pond is used for berm construction
5. Four ponds for waste rock facility, 1 pond for general plant site
6. Ponds are in addition to ponds included in APP permit

Sediment/Evaporation Pond Construction/Removal - User Input (cont.)														
		Sediment Ponds				Growth Media			Revegetation			Ripping/Scarifying		
	Description (required)	Excavating Material Condition (select)	Material Type (select)	Excavating Equipment Fleet (select)	Liner Type (select)	Growth Media Material Type (select)	Growth Media Placement Equipment Fleet (select)	Maximum Fleet Size (user override)		Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Scarify/ Ripping Fleet (select)
1	Retention Pond 1	1	Alluvium	Large		Alluvium	Scraper Dozer			Mix 4	None	None	Yes	Large Dozer
2	Retention Pond 2	1	Alluvium	Large		Alluvium	Scraper Dozer			Mix 4	None	None	Yes	Large Dozer
3	Retention Pond 3	1	Alluvium	Large		Alluvium	Scraper Dozer			Mix 4	None	None	Yes	Large Dozer
4	Retention Pond 4	1	Alluvium	Large		Alluvium	Scraper Dozer			Mix 4	None	None	Yes	Large Dozer
5	Retention Pond 5	1	Alluvium	Large		Alluvium	Scraper Dozer			Mix 4	None	None	Yes	Large Dozer

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$4,690	\$12,523	N/A	\$17,213
Diversion Ditch Liner	\$0	\$0	\$0	\$0
Diversion Ditch Rip-Rap	\$231,526	\$43,187	\$128,128	\$402,841
Sed Pond Construct/Regrade	\$2,725	\$11,060	N/A	\$13,785
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$2,715	\$7,415	N/A	\$10,130
Ripping/Scarifying Cost	\$455	\$1,845	N/A	\$2,300
Subtotal Earthworks	\$242,111	\$76,030	\$128,128	\$446,269
Diversion Ditch Revegetation	\$1,890	\$675	\$5,309	\$7,874
Sediment Pond Revegetation	\$770	\$275	\$2,165	\$3,210
Subtotal Revegetation	\$2,660	\$950	\$7,474	\$11,084
TOTALS	\$244,771	\$76,980	\$135,602	\$457,353

Drainage Control - Calculations

Diversion Ditch Volume Calculation

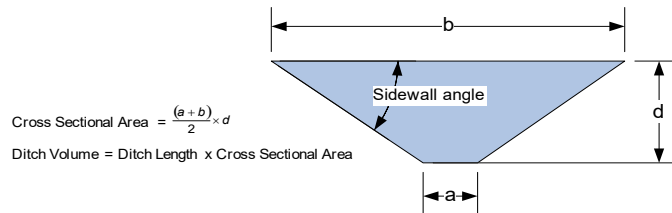


Figure 1 - Ditch Volume Calculation

- 1) Assume 20% swell for excavations
- 2) Assumes heavy duty trenching bucket is used

Sediment/Evaporation Pond Construction Calculation

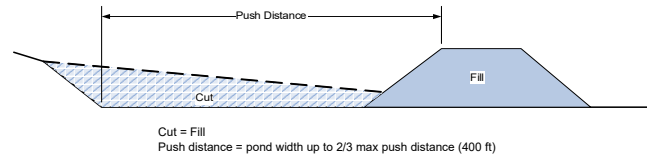


Figure 2 - Sediment Ponds

- 1) Assume balanced cut-to-fill for berm construction
- 2) Include cost for liner, if required.
- 3) Include line items for removal, if necessary.
- 4) Assume 20% swell for excavations
- 5) Minimum 1 hr ripping/scarifying per area
- 6) Minimum 1 acre revegetation crew time per area

Diversion Ditches - Excavation Costs

									Liner Installation				Rip-Rap Installation			
	Description (required)	Diversion Ditch Volume LCY	Diversion Ditch Equipment	Corrected Excavator Productivity LCY/hr	Total Hours	Diversion Ditch Labor Cost \$	Diversion Ditch Equipment Cost \$	Total Diversion Ditch Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Liner Cost \$	Labor Cost \$	Equipment Cost \$	Material Cost \$	Total Cost \$
1	Stormwater Ditch - no riprap	38,400	385BL	935	41	\$3,698	\$9,874	\$13,572	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	Stormwater Ditch - rip rap lined	10,160	385BL	935	11	\$992	\$2,649	\$3,641	\$0	\$0	\$0	\$0	\$231,526	\$43,187	\$128,128	\$402,841
		48,560			52	\$4,690	\$12,523	\$17,213	\$0	\$0	\$0	\$0	\$231,526	\$43,187	\$128,128	\$402,841

Notes: LCM assumes 20% swell from ditch volume

Diversion Ditches - Revegetation Costs

	Description (required)	Surface Area acres	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Stormwater Ditch - no riprap	10.70	\$1,498	\$535	\$4,208	\$6,241
2	Stormwater Ditch - rip rap lined	2.80	\$392	\$140	\$1,101	\$1,633
		13.50	\$1,890	\$675	\$5,309	\$7,874

**Closure Cost Estimate
Sediment & Drainage Control**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Drainage Control - Cost Summary				
	Labor	Equipment	Materials	Totals
Diversion Ditch Construction	\$4,690	\$12,523	N/A	\$17,213
Diversion Ditch Liner	\$0	\$0	\$0	\$0
Diversion Ditch Rip-Rap	\$231,526	\$43,187	\$128,128	\$402,841
Sed Pond Construct/Regrade	\$2,725	\$11,060	N/A	\$13,785
Liner Installation	\$0	\$0	\$0	\$0
Sed Pond Cover	\$2,715	\$7,415	N/A	\$10,130
Ripping/Scarifying Cost	\$455	\$1,845	N/A	\$2,300
Subtotal Earthworks	\$242,111	\$76,030	\$128,128	\$446,269
Diversion Ditch Revegetation	\$1,890	\$675	\$5,309	\$7,874
Sediment Pond Revegetation	\$770	\$275	\$2,165	\$3,210
Subtotal Revegetation	\$2,660	\$950	\$7,474	\$11,084
TOTALS	\$244,771	\$76,980	\$135,602	\$457,353

Sediment/Evaporation Ponds - Construction/Regrading Costs																	
Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83)											Earthwork			Liner			
	Description (required)	Regrading Volume cy	Sed/Evap Pond Equipment	Dozing Distance (see above) ft	Uncorrected Dozer Productivity LCY/hr	Grade Correction	Density Correction	Excavating Material	Corrected Productivity LCY/hr	Total Dozer Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Constr/ Regrading Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Material Cost \$	Total Liner Cost \$
1	Retention Pond 1	4,933	D10R	100	1,627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
2	Retention Pond 2	4,933	D10R	100	1,627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
3	Retention Pond 3	4,933	D10R	100	1,627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
4	Retention Pond 4	4,933	D10R	100	1,627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
5	Retention Pond 5	4,933	D10R	100	1,627	1.00	0.79	1.00	800	6	\$545	\$2,212	\$2,757	\$0	\$0	\$0	\$0
		24,665								30	\$2,725	\$11,060	\$13,785	\$0	\$0	\$0	\$0

Sediment/Evaporation Ponds - Growth Media Costs									
		Growth Media							
	Description (required)	Growth Media Volume cy	Growth Media Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Placement Cost \$
1	Retention Pond 1	1,775	631G/D10R/D7R	802	1	2	\$543	\$1,483	\$2,026
2	Retention Pond 2	1,775		802	1	2	\$543	\$1,483	\$2,026
3	Retention Pond 3	1,775		802	1	2	\$543	\$1,483	\$2,026
4	Retention Pond 4	1,775	631G/D10R/D7R	802	1	2	\$543	\$1,483	\$2,026
5	Retention Pond 5	1,775		802	1	2	\$543	\$1,483	\$2,026
		8,875				10	\$2,715	\$7,415	\$10,130

Sediment/Evaporation Ponds - Revegetation Costs												
	Description (required)	Surface Area acres	Long Ripping Distance ft	Ripping/ Scarifying Fleet	Scarifying/ Ripping Hours hrs	Scarifying/ Ripping Labor Costs \$	Scarifying/ Ripping Equipment Cost \$	Total Scarifying/ Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Retention Pond 1	1.10	300	D10R	1	\$91	\$369	\$460	\$154	\$55	\$433	\$642
2	Retention Pond 2	1.10	300	D10R	1	\$91	\$369	\$460	\$154	\$55	\$433	\$642
3	Retention Pond 3	1.10	300	D10R	1	\$91	\$369	\$460	\$154	\$55	\$433	\$642
4	Retention Pond 4	1.10	300	D10R	1	\$91	\$369	\$460	\$154	\$55	\$433	\$642
5	Retention Pond 5	1.10	300	D10R	1	\$91	\$369	\$460	\$154	\$55	\$433	\$642
		5.50			5	\$455	\$1,845	\$2,300	\$770	\$275	\$2,165	\$3,210

Closure Cost Estimate Process Ponds

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Process Ponds - Cost Summary				
	Labor	Equipment	Materials	Totals
Backfilling Costs	\$0	\$0	N/A	\$0
Growth Media Placement Costs	\$0	\$0	N/A	\$0
Liner Cutting & Folding Costs	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$0	\$0	\$0	\$0
Revegetation Costs	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

**Closure Cost Estimate
Landfills**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Landfills - Cost Summary				
	Labor	Equipment	Materials	Totals
Grading Costs	\$0	\$0	N/A	\$0
Cover Placement Cost	\$0	\$0	N/A	\$0
Topsoil Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$0	\$0	N/A	\$0
Subtotal Earthworks	\$0	\$0	\$0	\$0
Revegetation Cost	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$0

**Closure Cost Estimate
Yards, Etc.**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$43,115	\$175,104	N/A	\$218,219
Cover Placement Cost	\$115,300	\$269,811	N/A	\$385,111
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$149,953	\$608,993	N/A	\$758,946
Subtotal Earthworks	\$308,368	\$1,053,908		\$1,362,276
Revegetation Cost	\$349,020	\$124,650	\$980,373	\$1,454,043
TOTALS	\$657,388	\$1,178,558	\$980,373	\$2,816,319

Yards, Etc. - User Input												
You must fill in ALL green cells and relevant blue cells in this section for each building or facility												
Facility Description				Physical			Cover			Growth Media		
Description (required)	ID Code	Type	Area acres	Average Flat Area Long Dimension (ripping distance) ft	Regrade Volume (calculated elsewhere) cy	Cover Thickness in	Distance from Cover Borrow Area ft	Slope from Facility to Borrow Area % grade	Growth Media Thickness in	Distance from Growth Media Stockpile ft	Slope from Facility to Stockpile % grade	
1 Plant Site facilities		Yard	154.00	500		12	500	5.0				
2 Yards, storage, and buffer areas		Other Facilities	750.00	500	37,500							
3 TSF-1 and TSF-2 general areas		Other Facilities	1253.00	500	62,650							
4 Heap Leach Facility general area		Other Facilities	336.00	500	16,800							

Notes:

1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)
3. Yards, storage, and buffer areas include other disturbed areas within property boundaries. Reclamation includes minor regrading, scarifying and seeding.
4. Plant site facilities excludes areas reclaimed under buildings. Assumes cover material located adjacent.

Yards, Etc. - User Input (cont.)															
You must fill in ALL green cells and relevant blue cells in this section for each building or facility															
		Grading			Cover			Growth Media			Revegetation				
	Description (required)	Regrading Material Condition (select)	Regrading Material Type (select)	Regrading Equipment Fleet (select)	Cover Material Type (select)	Cover Placement Equipment Fleet (select)	Maximum Fleet Size (user override)	Growth Media Material Type (select)	Growth Media Equipment Fleet (select)	Maximum Fleet Size (user override)	Seed Mix (select)	Mulch (select)	Fertilizer (select)	Scarify/ Rip? (select)	Ripping Fleet (select)
1	Plant Site facilities	1	Alluvium	Large	Alluvium	Large Truck					Mix 4	None	None	Yes	Large Dozer
2	Yards, storage, and buffer areas	1	Alluvium	Large							Mix 4	None	None	Yes	Large Dozer
3	TSF-1 and TSF-2 general areas	1	Alluvium	Large							Mix 4	None	None	Yes	Large Dozer
4	Heap Leach Facility general area	1	Alluvium	Large							Mix 4	None	None	Yes	Large Dozer

Notes:

1. Material Types are used for density correction based on material densities in Caterpillar Performance Handbook material density table

Yards, Etc. - Calculations
<div>Grading Calculations</div> <p>Average push distance assumed to be 2/3 of the 600 feet maximum from Caterpillar Handbook or 400 feet Material assumed to be loose stockpile (1.2 productivity factor) Slope assumed to be 0 to 5% (1.0 productivity factor)</p>
<div>Cover Volume Calculation</div> <p>Yard area x cover thickness</p>
<div>Ripping/Scarifying Calculations</div> <p>Flat area width = Final flat area + Average long dimensions Number of passes = Flat area width + Grader width Travel distance = Number of passes x Average long dimensions Total hours = (Travel distance + Grader productivity) + (Number of passes x Grader maneuver time) Minimum 1 hr ripping/scarifying per area</p>

**Closure Cost Estimate
Yards, Etc.**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Yards, Etc. - Cost Summary				
	Labor	Equipment	Materials	Totals
Regrading Cost	\$43,115	\$175,104	N/A	\$218,219
Cover Placement Cost	\$115,300	\$269,811	N/A	\$385,111
Growth Media Placement Cost	\$0	\$0	N/A	\$0
Ripping/Scarifying Cost	\$149,953	\$608,993	N/A	\$758,946
Subtotal Earthworks	\$308,368	\$1,053,908		\$1,362,276
Revegetation Cost	\$349,020	\$124,650	\$980,373	\$1,454,043
TOTALS	\$657,388	\$1,178,558	\$980,373	\$2,816,319

Revegetation

Minimum 1 acre revegetation crew time per acre

Yards, Etc. - Regrading Costs

Productivity = Dozer Productivity x Grade Correction x Density Correction x Operator (0.75) x Material x Visibility x Job Efficiency (0.83) x (Slot/Side-by-Side)

	Description (required)	Regrading Volume cy	Dozing Distance (see above) ft	Regrading Fleet	Uncorrected Dozer Productivity cy/hr	Grade Correction	Dozing Material	Density Correction	Total Hourly Productivity cy/hr	Total Dozer Hours hr	Total Labor Cost \$	Total Equipment Cost \$	Total Regrading Cost \$
1	Plant Site facilities			D10R	501						\$0	\$0	\$0
2	Yards, storage, and buffer areas	37,500	400	D10R	501	1.0	1.0	0.79	246	152	\$13,797	\$56,033	\$69,830
3	TSF-1 and TSF-2 general areas	62,650	400	D10R	501	1.0	1.0	0.79	246	255	\$23,146	\$94,003	\$117,149
4	Heap Leach Facility general area	16,800	400	D10R	501	1.0	1.0	0.79	246	68	\$6,172	\$25,068	\$31,240
		116,950								475	\$43,115	\$175,104	\$218,219

Yards, Etc. - Cover and Growth Media Costs

		Cover								Growth Media							
	Description (required)	Cover Volume cy	Topsoil Replacement Fleet	Fleet Productivity LCY/hr	Number of Trucks/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Cover Cost \$	Growth Media Volume cy	Growth Media Fleet	Fleet Productivity LCY/hr	Number of Trucker/ Scrapers	Total Fleet Hours	Total Labor Cost \$	Total Equipment Cost \$	Total Growth Media Cost \$
1	Plant Site facilities	248,453	769D/988G/D7R	684	2	363	\$115,300	\$269,811	\$385,111						\$0	\$0	\$0
2	Yards, storage, and buffer areas						\$0	\$0	\$0						\$0	\$0	\$0
3	TSF-1 and TSF-2 general areas						\$0	\$0	\$0						\$0	\$0	\$0
4	Heap Leach Facility general area						\$0	\$0	\$0						\$0	\$0	\$0
		248,453				363	\$115,300	\$269,811	\$385,111						\$0	\$0	\$0

Yards, Etc. - Scarifying/Revegetation Costs

	Description (required)	Surface Area acres	Area Long Dimension ft	Ripping/Scarifying Fleet	Scarifying/Ripping Hours hrs	Scarifying/Ripping Labor Costs \$	Scarifying/Ripping Equipment Cost \$	Total Scarifying/Ripping Costs \$	Revegetation Labor Cost \$	Revegetation Equipment Cost \$	Revegetation Material Cost \$	Total Revegetation Cost \$
1	Plant Site facilities	154.00	500	D10R	102	\$9,259	\$37,601	\$46,860	\$21,560	\$7,700	\$60,561	\$89,821
2	Yards, storage, and buffer areas	750.00	500	D10R	497	\$45,113	\$183,214	\$228,327	\$105,000	\$37,500	\$294,938	\$437,438
3	TSF-1 and TSF-2 general areas	1253.00	500	D10R	830	\$75,339	\$305,971	\$381,310	\$175,420	\$62,650	\$492,742	\$730,812
4	Heap Leach Facility general area	336.00	500	D10R	223	\$20,242	\$82,207	\$102,449	\$47,040	\$16,800	\$132,132	\$195,972
		2,493.00			1,652	\$149,953	\$608,993	\$758,946	\$349,020	\$124,650	\$980,373	\$1,454,043

Closure Cost Estimate Waste Disposal

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$0	\$0	N/A	\$0
Solid Waste - Off Site				\$143,213
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$143,213

Waste Disposal - User Input - Solid Waste									
						Landfill (Bulk) Disposal		Dumpster	
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity cy	Distance to Landfill ft	Slope to Landfill % grade	Number of Trucks (user override)	Months Dumpster Rental months
1	Solid Waste Removal		Waste Mgmt & Disposal	Dumpster	2,000				24

Notes:

1. All Physical parameters must be input even if manual overrides for volume or area are used.
2. If Slope from facility to borrow source is >20, downhill travel time may be underestimated due to limitation of uphill travel time curves and downhill speed tables from CAT Handbook (see Productivity Sheet)

Waste Disposal - User Input - Hazardous Materials									
	Description (required)	ID Code	Waste Type (select)	Container Type (select)	Vacuum Truck Size (select)	Liquid Quantity gallons	Soild Quantity cy	One Way Travel Distance to Disposal Site mi	One Way Travel Time to Disposal Site hr

Notes:

1. Use Other Demo & Equip Removal Sheet for tank removal

Waste Disposal - User Input - Hydrocarbon Contaminated Soils						
	Description (required)	ID Code	Waste Type (select)	Disposal Method (select)	Quantity cy	Travel Distance to Offsite Disposal mi

Notes:

1. Use Yards or Landfills Sheets for bioremediation facility reclamation

Closure Cost Estimate Waste Disposal

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Waste Disposal - Cost Summary				
	Labor	Equipment	Fees	Totals
Solid Waste - On Site	\$0	\$0	N/A	\$0
Solid Waste - Off Site				\$143,213
Hazardous Materials				\$0
Hydrocarbon Contaminated Soils	\$0	\$0	\$0	\$0
TOTALS	\$0	\$0	\$0	\$143,213

Waste Disposal - Assumptions & Calculations

Solid Waste Disposal

Off site disposal assumes use of average rolloff dumpster [30 cy (m3), 10 ton (tonne)]
 On site disposal assumes use of small loader/truck fleet for haulage
 Average density for on site disposal = 2,600 lb/cy (1,540 kg/m3)
 For on site disposal only 1 truck is required unless total truck hours > 8, only 2 trucks unless total truck hours are > 16

Hazardous Materials Disposal

Assumes all hazardous materials are known
 Enter EITHER solid or liquid quantity each line.
 If container type = 55 gallon (200 liter) drum then solid waste hauling costs apply
 Average density for solids assumed to be 2,600 lb/cy (1,540 kg/m3)
 Vacuum truck sizes: small = 2,200 gal (~8,300 litres), large = 5,000 gal (~19,000 litres)
 Vacuum truck on site for 4 hours for each load

Hydrocarbon Contaminated Soils Disposal

Assumes all hazardous materials are known
 On site disposal assumes biopad treatment
 Exavation productivity =45 cy./hr (35 m3/hr) (Means Heavy Construction, 2006: 02315-424-0360)

Waste Disposal - Solid Waste Disposal

	Description (required)	Waste Volume cy	Number of Off Site Dumpster Loads	Landfill Fleet Equipment	Landfill Fleet Productivity LCY/hr	Number of Trucks	Total Fleet Hours	Total Dumpster Cost \$	Total Labor Cost \$	Total Equipment Cost \$	Total Waste Disposal Cost \$
1	Solid Waste Removal	2,000	67					\$143,213	\$0	\$0	\$0
		2,000						\$143,213	\$0	\$0	\$0

Closure Cost Estimate
Well Abandonment

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$135,406	\$252,808	\$21,161	\$409,375
Monitoring Wells	\$0	\$0	\$0	\$0
TOTALS	\$135,406	\$252,808	\$21,161	\$409,375

Production, Dewatering and Infiltration Well Closure																											
	Description (required)	ID Code	Number of Holes	Casing Diam in	Average Depth ⁽¹⁾ ft bgs	Depth to First Water ft bgs	Original Static Water Level ft bgs	Top of Slotted Casing ⁽²⁾ ft bgs	Blank Casing Below Top of Screen ⁽²⁾ ft	Type of Pump (if any) (select)	Depth to Pump ft bgs	Hole Plug Method (select)	Casing Volume per ft cf	Perforation Length ^(3,4) ft	Grout Volume per Hole ^(4,5) cy	Cement Volume per Hole ⁽⁶⁾ cy	Inert Media Volume per Hole ⁽⁷⁾ cy	Pump Removal Labor Cost \$	Pump Removal Equip Cost \$	Perf Labor Cost \$	Perf Equip Cost ⁽⁸⁾ \$	Grout + Cement Labor Cost ⁽⁹⁾ \$	Grout + Cement Equip Cost ⁽⁹⁾ \$	Grout + Cement Material Cost \$	Inert Media Labor Cost ⁽¹⁰⁾ \$	Inert Media Equip Cost ⁽⁹⁾ \$	Total Cost \$
1	Dewatering Wells		10	12.0	1,000	200	200	300	600	Submersible	800	Grout + Ball	0.790	750	49.70	0.60	2.90	\$61,200	\$150,880	\$42,468	\$67,018	\$30,431	\$34,588	\$21,161	\$1,307	\$322	\$409,375
																		\$61,200	\$150,880	\$42,468	\$67,018	\$30,431	\$34,588	\$21,161	\$1,307	\$322	\$409,375
<div><div>(1) For previously abandoned holes enter "0" for depth</div><div>(2) Wells abandoned per Nevada Administrative Code (NAC 534.420). Hole grouted and perforated from bottom to 50 feet (15.24m) above the top of the screen, or first water encountered or original static water level, depending on vertical hydraulic gradient and well construction parameters. Inert media (cuttings or alluvium) used from top of grout to top seal.</div><div>(3) Perforation length = amount of blank casing below first water (for confined aquifers) or predicted recovered water table (unconfined aquifers) + 50 feet (15.24m) of blank casing above water table</div><div>(4) Assumes 50' (15.24m) sanitary seal at top of hole. Therefore, perforation and grouting only required to bottom of sanitary seal.</div><div>(5) Assumes 100% loss to formation for grout (abandonite) for screened and perforated sections.</div><div>(6) Assumes 20' (6m) top seal of cement in casing only. See note 4.</div><div>(7) Inert material is cuttings or alluvium sourced locally.</div><div>(8) Includes perforation tool wear cost/ft of perforation (see Productivity Sheet).</div><div>(9) See Productivity Sheet for hourly production. Minimum 1 hr per hole + fixed hours per hole for move and setup. If no perforation required, use standard drill rig.</div><div>(10) See Productivity Sheet for hourly production. Minimum 1 hr per hole.</div></div>																											
<div>Notes:</div> <div></div>																											

Closure Cost Estimate
Well Abandonment

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

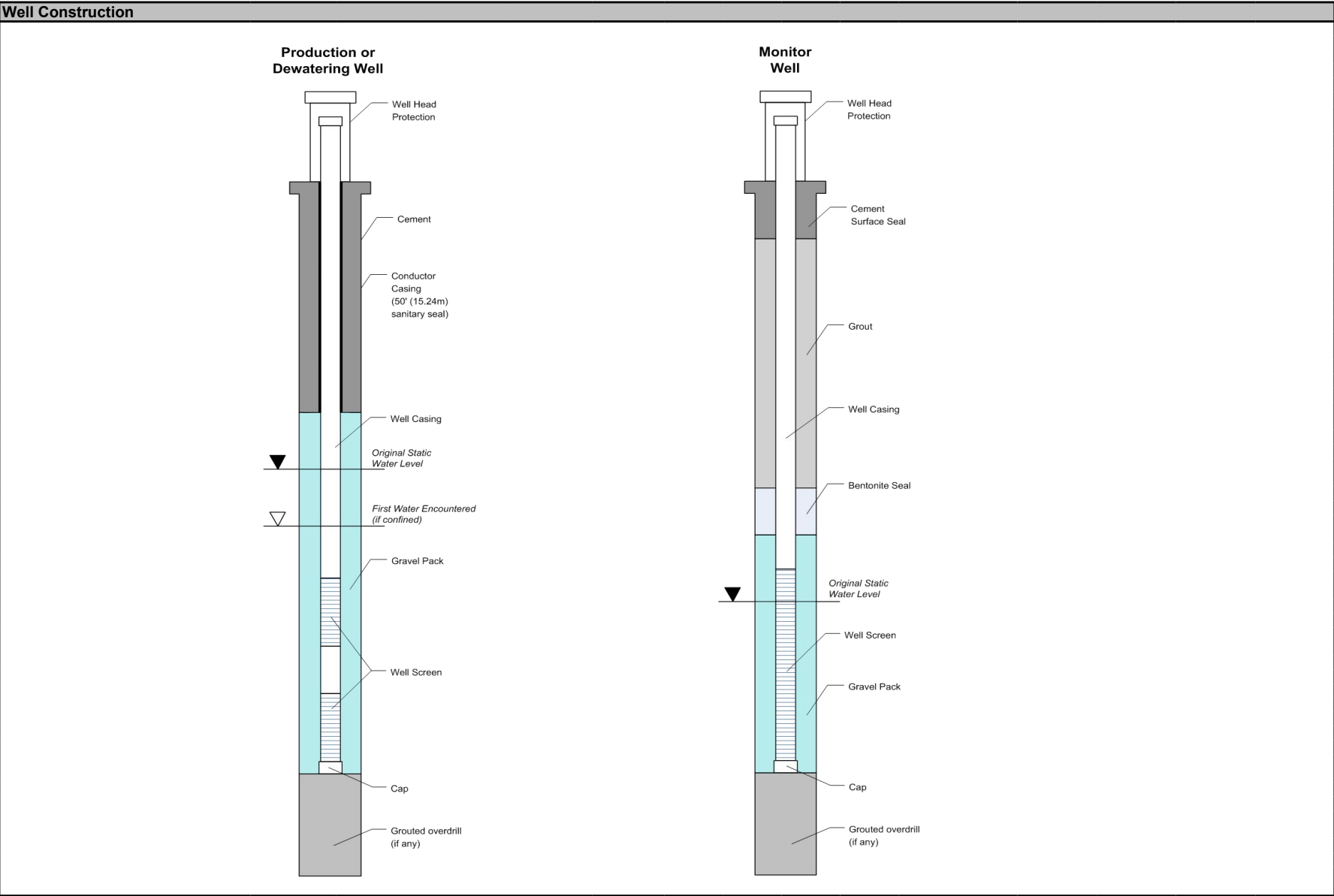
Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$135,406	\$252,808	\$21,161	\$409,375
Monitoring Wells	\$0	\$0	\$0	\$0
TOTALS	\$135,406	\$252,808	\$21,161	\$409,375

Monitoring Well Closure																			
	Description (required)	ID Code	Number of Holes	Casing Diam in	Average Depth ft bgs	Top of Screen ⁽¹⁾ ft bgs	Hole Plug Method (select)	Casing Volume per ft ft3	Grout Volume/ Well ^(2,3) cy	Cement Volume per Hole ⁽⁴⁾ cy	Inert Backfill Volume per Hole ⁽⁵⁾ cy	Total Grouting Hours/ Hole hr	Total Inert Media Hours/ Hole hr	Grout + Cement Labor Cost ⁽⁶⁾ \$	Grout + Cement Equip Cost ⁽⁶⁾ \$	Grout + Cement Material Cost \$	Inert Material Labor Cost ⁽⁷⁾ \$	Inert Material Equip Cost ⁽⁷⁾ \$	Total Cost \$
														\$0	\$0	\$0	\$0	\$0	\$0
<div>Wells abandoned per NAC 534.420 with bentonite grout placed to 50 feet above the top of the screen (see note 1).</div> <div>(1) Assumes top of screen is at or above the static water level (in unconfined aquifers) or the depth of first water encountered (in confined aquifers).</div> <div>(2) Assumes 25% loss to formation for grouting</div> <div>(3) Grouting only required to 50' (15.24m) above the top of screen because monitor wells are constructed with a seal in the annular space.</div> <div>(4) Assumes top 20' (6m) plugged with cement.</div> <div>(5) Assumes hole plugged with inert material (cuttings or alluvium) above grout up to cement surface plug.</div> <div>(6) See Productivity Sheet for hourly production. Minimum 1 hr per hole + fixed hours per hole for move and setup (see Productivity Sheet).</div> <div>(7) See Productivity Sheet for hourly production. Minimum 1 hr per hole.</div> <div>Notes:</div> <div></div>																			

Closure Cost Estimate
Well Abandonment

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Well Abandonment				
	Labor	Equipment	Materials	Totals
Production, Dewatering, Infiltration Wells	\$135,406	\$252,808	\$21,161	\$409,375
Monitoring Wells	\$0	\$0	\$0	\$0
TOTALS	\$135,406	\$252,808	\$21,161	\$409,375



**Closure Cost Estimate
Misc. Costs**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Miscellaneous Cost Summary				
	Labor	Equipment	Materials	Totals
Fence Removal	\$0	\$0	N/A	\$0
Fence Installation	\$59,292	\$9,338	\$248,140	\$316,770
Culvert & Buried Pipe Removal	\$1,037,634	\$289,380	N/A	\$1,327,014
Surface Pipe Removal	\$0	\$0	N/A	\$0
Power Lines	\$449,318	N/A	N/A	\$449,318
Substations/Transformers	\$294,985	N/A	N/A	\$294,985
Rip-rap, rock lining, gabions	\$0	\$0	\$0	\$0
Other Costs	\$0	\$0	\$0	\$0
TOTALS	\$1,841,229	\$298,718	\$248,140	\$2,388,087

Fence Installation								
You must fill in ALL green and blue cells								
			Input		Costs			
	Description (required)	ID Code	Length ft	Type (select type)	Labor Cost \$	Equipment Cost \$	Material Cost (\$)	Total Cost \$
1	Peach Pit		318	Chain link 8-10ft	\$2,887	\$455	\$12,084	\$15,426
2	Elgin Pit		4843	Chain link 8-10ft	\$43,974	\$6,925	\$184,034	\$234,933
3	Rosemont Pit		1369	Chain link 8-10ft	\$12,431	\$1,958	\$52,022	\$66,411
					\$59,292	\$9,338	\$248,140	\$316,770

Notes: 1. Assumes fencing around each pit. Other pits previously fenced are filled with waste rock.

Culvert & Buried Pipe Removal								
You must fill in ALL green and blue cells								
			Input			Costs		
	Description (required)	ID Code	Length ft	Type (select type)	Location (select)	Labor Cost \$	Equipment Cost \$	Total Cost \$
1	Water Pipes through utility corridor		64000	24 in (600 mm) Di	Off site	\$963,840	\$268,800	\$1,232,640
2	Haul Road Culverts		4300	24 in (600 mm) Di	On site	\$64,758	\$18,060	\$82,818
3	Plant site access road culverts		600	24 in (600 mm) Di	On site	\$9,036	\$2,520	\$11,556
						\$1,037,634	\$289,380	\$1,327,014

Notes: 1. Haul road culverts assume 40' of pipe left in place (100' removed) to maintain road for maintenance access
2. Haul road culverts assume 4 per mile for 4.3 miles averaging 140' feet in length each.
3. Plant site access roads assumed to have 10, 24-inch diameter culverts, each 60' feet in length.

Closure Cost Estimate Misc. Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
 Date of Submittal: May 3, 2022
 File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Miscellaneous Cost Summary				
	Labor	Equipment	Materials	Totals
Fence Removal	\$0	\$0	N/A	\$0
Fence Installation	\$59,292	\$9,338	\$248,140	\$316,770
Culvert & Buried Pipe Removal	\$1,037,634	\$289,380	N/A	\$1,327,014
Surface Pipe Removal	\$0	\$0	N/A	\$0
Power Lines	\$449,318	N/A	N/A	\$449,318
Substations/Transformers	\$294,985	N/A	N/A	\$294,985
Rip-rap, rock lining, gabions	\$0	\$0	\$0	\$0
Other Costs	\$0	\$0	\$0	\$0
TOTALS	\$1,841,229	\$298,718	\$248,140	\$2,388,087

Surface Pipe Removal								
You must fill in ALL green and blue cells								
			Input			Costs		
Description (required)	ID Code		Length ft	Type (select type)	Location (select)	Labor Cost \$	Equipment Cost \$	Total Cost \$
						\$0	\$0	\$0

Notes:

Power Line and Substation Removal										
You must fill in ALL green and blue cells										
			Input				Costs			Cost Breakdown
Description (required)	ID Code		Power Line Length miles	Power Line Type (select)	Number of Substations #	Location (select)	Power Line Removal \$	Substation Removal \$	Total Cost \$	Labor Cost \$
1 Powerline through utility corridor			9.1	Single Pole	1	Off-site	\$425,916	\$58,997	\$484,913	\$96,983
2 On-site powerlines and substations			0.5	Single Pole	4	On-site	\$23,402	\$235,988	\$259,390	\$51,878
							\$449,318	\$294,985	\$744,303	\$148,861

Notes: If substation owned by operator, use Other Demo & Equipment Removal sheet
 User may need to add line items in Foundations & Buildings for substation slab demolition and fence removal
 Labor/Equipment costs assume approximately 80% of cost are equipment and 20% are labor related costs

1. Off-site substation is Toro Switchyard
2. On-site substations include Helvetia, mill, and 2 SX-EW Rectifier substations

Closure Cost Estimate Monitoring

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Reclamation Monitoring & Maintenance - Cost Summary				
	Labor	Equipment	Lab & Materials	Totals
Revegetation Maintenance	\$47,872	\$17,097	\$134,469	\$199,438
Erosion Maintenance	\$1,843	\$5,528	N/A	\$7,371
Reclamation Monitoring	\$55,616	\$1,288	N/A	\$56,904
Subtotal Reclamation Monitoring	\$105,331	\$23,913	\$134,469	\$263,713
Water Quality Monitoring	\$0	\$0	\$0	\$0
TOTAL MONITORING	\$105,331	\$23,913	\$134,469	\$263,713

Reclamation Maintenance								
Description	Total Revegetation Surface Area (1,2) acres	% Area Requiring Re seeding	Seed Mix (select)	Area Requiring Re seeding acres	Seed \$/acres	Labor \$/acres	Equipment \$/acres	Totals \$
Revegetation Maintenance	3,419	10%	Mix 4	341.9	\$393.25	\$140.00	\$50.00	
Labor								\$47,872
Equipment								\$17,097
Materials								\$134,469
Cost/Acre								\$583
							Subtotal	\$199,438

Notes: 1) Surface area is NOT the same as footprint disturbance area typically used for permitting purposes.

Does not include areas for APP Permit

	Total Volume Growth Media cy	% Volume Requiring Maintenance	Average Growth Media Placement Cost \$/CY	Volume Requiring Replacement cy		Labor (assume: 25%) \$/acres	Equipment (assume: 75%) \$/acres	Total \$
Erosion Maintenance	29,251	10%	\$2.52	2,925		\$1,843.00	\$5,528.00	\$7,371

Notes:

Does not include areas for APP Permit

Reclamation Monitoring					
Description	Hrs/Day	Days/Year	Number of Years	Rate \$/hr	
Field Work					
Field Geologist/Engineer	8	4	5	\$162.04	\$25,926
Range Scientist	8	4	5	\$146.94	\$23,510
Reporting					
Field Geologist/Engineer	1	4	5	\$162.04	\$3,241
Range Scientist	1	4	5	\$146.94	\$2,939
				Subtotal	\$55,616
Travel					
	Hrs/Trip hr	Trips/Year	Years	Truck Cost \$/hr	
Travel	2	4	5	\$32.19	\$1,288
				Subtotal	\$1,288
				Total Reclamation Monitoring	\$56,904

Notes: Does not include areas for APP Permit
All sampling and reporting performed under APP Permit

Closure Cost Estimate Constr. Mgmt

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Construction Management & Road Maintenance - Cost Summary				
	Labor	Equipment	Materials	Totals
Construction Management	\$33,677	\$6,578	N/A	\$40,255
Construction Support		\$0		\$0
Road Maintenance	\$0	\$0	\$0	\$0
TOTAL CONSTRUCTION MANAGEMENT	\$33,677	\$6,578	\$0	\$40,255

Construction Management							
Construction Management Staff							
Description	Duration mo.	Hours/ Month hr.	Number of Supervisors	Supervisor Rate \$/hr	Labor Cost \$	Equipment Cost ⁽¹⁾ \$	Totals \$
Active Reclamation					\$0	\$0	\$0
Monitoring & Maintenance	60	4	1	\$140.32	\$33,677	\$6,578	\$40,255
Total Staff					\$33,677	\$6,578	\$40,255
Construction Management Support							
Description	Duration mo.	Number of Units		Rental Rate \$/mo	Generator Cost \$/mo	Equipment Cost ⁽¹⁾ \$	Totals \$
Temporary Office Rental						\$0	\$0
Temporary Toilets						\$0	\$0
Total Support						\$0	\$0
Notes: Office rental assumes only 1 generator required for every 4 trailers							
Total Construction Management							\$40,255

Road Maintenance							
Description	Fleet Size (select)	Number	Duration mo.	Hours/ Month hr.	Labor Cost \$	Equipment Cost \$	Totals \$
Active Reclamation							
Water Truck					\$0	\$0	\$0
Grader					\$0	\$0	\$0
Monitoring & Maintenance							
Water Truck					\$0	\$0	\$0
Grader					\$0	\$0	\$0
Description	Gallons/ Day	Days/ Month	Duration mo.	Cost/ Gallon \$			Totals \$
Water Fees							
Water Fees							\$0
Total Project Maintenance					\$0	\$0	\$0
Notes: 1) Supervisor equipment = pickup truck 2. Office/toilets covered by APP Permit 3. Road maintenance covered by APP Permit 4. Construction Management for 5 Years of Monitoring for MLRP reclamation vegetation and erosion 5. Other Construction Management covered under APP Permit							

**Closure Cost Estimate
Labor Rates**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
 Date of Submittal: May 3, 2022
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Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

ZONE ADJUSTMENTS			
Cost Basis/Project Region	Southern Nevada - Adjusted for Arizona	Clark, Esmeralda, Lincoln and Nye Counties - Adjusted for Pima County, AZ	
Power Equipment Operators	Zone A	\$0.00	
Truck Drivers	Zone A	\$0.00	
Laborers	Zone A	\$0.00	

INDIRECT COSTS		
Unemployment (%)	3.00%	
Retirement/SS/Medicare (%)	7.65%	
Workman's Compensation (%)	7.60%	
Other Indirects		
State Payroll Tax (13),(15),(17),(18)	0.80%	
Total Other Indirects	0.80%	

HOURLY LABOR RATE TABLE											
EQUIPMENT TYPE (1) OR JOB DESCRIPTION	Labor Group	Base Rate (\$/hr)	Zone Adjustment (\$/hr)	Hourly Wage (\$/hr)	Fringe (\$/hr)	Retirement/ Medicare (\$/hr)	Unemployment Insurance (\$/hr)	Workman's Compensation (\$/hr)	Other Indirect Costs (\$/hr)	Total (\$/hr)	
Equipment Operators (\$/hr) (2)											
Bulldozers											
D6R	Group 5	\$53.02	\$0.00	\$53.02	\$27.65	\$1.59	\$4.06	\$4.03	\$0.42	\$90.77	
D6R w/ Winch				\$53.02	\$27.65						
D7R	Group 5	\$53.02	\$0.00	\$53.02	\$27.65	\$1.59	\$4.06	\$4.03	\$0.42	\$90.77	
D8R	Group 5	\$53.02	\$0.00	\$53.02	\$27.65	\$1.59	\$4.06	\$4.03	\$0.42	\$90.77	
D9R	Group 5	\$53.02	\$0.00	\$53.02	\$27.65	\$1.59	\$4.06	\$4.03	\$0.42	\$90.77	
D10R	Group 5	\$53.02	\$0.00	\$53.02	\$27.65	\$1.59	\$4.06	\$4.03	\$0.42	\$90.77	
D11R	Group 5	\$53.02	\$0.00	\$53.02	\$27.65	\$1.59	\$4.06	\$4.03	\$0.42	\$90.77	
Wheeled Dozers											
824G					\$27.65						
834G					\$27.65						
844					\$27.65						
854G					\$27.65						
Motor Graders											
120H	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
14G/H	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
16G/H	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
24M					\$27.65						
Track Excavators											
312C	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
320C	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
325C	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
330C	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
345B	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
365BL					\$27.65						
385BL	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
Scrapers											
631G	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
637G	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$90.20	
Wheeled Loaders											
924G	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72	
928G	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72	
950G	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72	
966G	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72	
972G	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72	
980G	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72	
988G	Group 10	\$52.37	\$0.00	\$52.37	\$27.65	\$1.57	\$4.01	\$3.98	\$0.42	\$90.00	
990					\$27.65						
992G	Group 10	\$52.37	\$0.00	\$52.37	\$27.65	\$1.57	\$4.01	\$3.98	\$0.42	\$90.00	
994D					\$27.65						
L2350					\$27.65						
Shovels											
PC2000					\$27.65						
PC3000					\$27.65						
PC4000					\$27.65						
PC5500					\$27.65						
PC8000					\$27.65						
Hydraulic Hammers											
H-120 (fits 325)											
H-160 (fits 345)											
H-180 (fits 365/385)											
Demolition Shears											
S340 (fits 322/325/330)											
S365 (fits 330/345)											
S390 (fits 365/385)											
Demolition Grapples											
G315 (fits 322/325)											
G320 (fits 325/330)											
G330 (fits 345/365)											

**Closure Cost Estimate
Labor Rates**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Color Code Key	
User Input - Direct Input	Direct Input
User Input - Pull Down List	Pull Down Selection
Program Constant (can override)	Alternate Input
Program Calculated Value	Locked Cell - Formula or Reference

ZONE ADJUSTMENTS			
Cost Basis/Project Region	Southern Nevada - Adjusted for Arizona	Clark, Esmeralda, Lincoln and Nye Counties - Adjusted for Pima County, AZ	
Power Equipment Operators	Zone A	\$0.00	
Truck Drivers	Zone A	\$0.00	
Laborers	Zone A	\$0.00	

INDIRECT COSTS		
Unemployment (%)	3.00%	
Retirement/SS/Medicare (%)	7.65%	
Workman's Compensation (%)	7.60%	
Other Indirects		
State Payroll Tax (13),(15),(17),(18)	0.80%	
Total Other Indirects	0.80%	

HOURLY LABOR RATE TABLE										
Other Equipment										
420D 4WD Backhoe	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72
428D 4WD Backhoe	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72
CS533E Vibratory Roller	Group 4	\$51.92	\$0.00	\$51.92	\$27.65	\$1.56	\$3.97	\$3.95	\$0.42	\$89.46
CS633E Vibratory Roller					\$27.65					
CP533E Sheepsfoot Compactor					\$27.65					
CP633E Sheepsfoot Compactor					\$27.65					
Light Truck - 1.5 Ton					\$27.65					
Supervisor's Truck					\$27.65					
Flatbed Truck					\$27.65					
Air Compressor + tools	Group 1	\$49.19	\$0.00	\$49.19	\$27.65	\$1.48	\$3.76	\$3.74	\$0.39	\$85.82
Welding Equipment	Group 3	\$31.31	\$0.00	\$31.31	\$27.65	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43
Heavy Duty Drill Rig	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$89.78
Pump (plugging) Drill Rig	Group 12	\$52.54	\$0.00	\$52.54	\$27.65	\$1.58	\$4.02	\$3.99	\$0.42	\$89.78
Concrete Pump					\$27.65					
Gas Engine Vibrator	Group 3A	\$31.81	\$0.00	\$31.81	\$27.65	\$0.95	\$2.43	\$2.42	\$0.25	\$65.52
Generator 5KW					\$27.65					
HDEP Welder (pipe or liner)					\$27.65					
5 Ton Crane	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72
20 Ton Crane	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72
50 Ton Crane	Group 6	\$52.14	\$0.00	\$52.14	\$27.65	\$1.56	\$3.99	\$3.96	\$0.42	\$89.72
120 Ton Crane					\$27.65					

NOTES:	
(1) Equipment Type:	Caterpillar model or equivalent, LeTourneau
(2) Equipment Operator Source:	D-B ENGI0012-005 10/1/2021
(3) Zone Basis:	From Tucson City Hall

Truck Drivers (\$/hr) (4)										
725	Dump Truck Driver	\$31.31	\$0.00	\$31.31	\$31.16	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43
730	Dump Truck Driver	\$31.31	\$0.00	\$31.31	\$31.16	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43
735	Dump Truck Driver	\$31.31	\$0.00	\$31.31	\$31.16	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43
740	Dump Truck Driver	\$31.31	\$0.00	\$31.31	\$31.16	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43
769D	Dump Truck Driver	\$31.31	\$0.00	\$31.31	\$31.16	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43
773E					\$31.16					
777D	Dump Truck Driver	\$31.31	\$0.00	\$31.31	\$31.16	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43
785C					\$31.16					
793C					\$31.16					
797B					\$31.16					
613E (5,000 gal) Water Wagon		\$31.31	\$0.00	\$31.31	\$31.16	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43
621E (8,000 gal) Water Wagon		\$31.31	\$0.00	\$31.31	\$31.16	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43
777D Water Truck					\$31.16					
785C Water Truck					\$31.16					
Dump Truck (10-12 yd3)	Dump Truck Driver	\$31.31	\$0.00	\$31.31	\$31.16	\$0.94	\$2.40	\$2.38	\$0.25	\$68.43

NOTES:	
(4) Truck Driver Source:	D-B LABO0872-002 7/2/2021
(5) Zone Basis:	From Tucson City Hall

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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

ZONE ADJUSTMENTS			
Cost Basis/Project Region	Southern Nevada - Adjusted for Arizona	Clark, Esmeralda, Lincoln and Nye Counties - Adjusted for Pima County, AZ	
Power Equipment Operators	Zone A	\$0.00	
Truck Drivers	Zone A	\$0.00	
Laborers	Zone A	\$0.00	

HOURLY LABOR RATE TABLE											
Laborers (\$/hr) (6,7)											
General Laborer	Group 1	\$31.00	\$0.00	\$31.00	\$31.16	\$0.93	\$2.37	\$2.36	\$0.25	\$68.07	
Skilled Laborer	Group 2	\$31.21	\$0.00	\$31.21	\$31.16	\$0.94	\$2.39	\$2.37	\$0.25	\$68.32	
Driller's Helper	Group 5	\$31.50	\$0.00	\$31.50	\$31.16	\$0.95	\$2.41	\$2.39	\$0.25	\$68.66	
Rodmen (reinforcing concrete)	Group 3A	\$31.81	\$0.00	\$31.81	\$31.16	\$0.95	\$2.43	\$2.42	\$0.25	\$69.03	
Cement finisher	Group 5	\$31.50	\$0.00	\$31.50	\$31.16	\$0.95	\$2.41	\$2.39	\$0.25	\$68.66	
Carpenter		\$47.23	\$0.00	\$47.23	\$17.98	\$1.42	\$3.61	\$3.59	\$0.38	\$74.21	

[illegible]

NOTES:	
(9) Project Manager:	RS Means 2020 Q2 (01.31.1320)
(9) Foreman Source:	RS Means 2020 Q2 (01.31.1320)
(9) Technical Labor Source:	Wood plc 2020
Other Labor Source:	
Other Labor Source:	
†Additional User Markups	
(These are added by the user to the base rate to account for site-specific conditions or corporate requirements)	

Closure Cost Estimate Equipment Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Monthly Rental Basis: 160 hrs month

EQUIPMENT RENTAL RATE TABLE				
EQUIPMENT TYPE (1)	Monthly Owner/Rental Rate	Equipment Hourly Rate	Fuel/Lube/ Wear	Total Rate
Bulldozers				
D6R	\$10,605.00	\$66.28	\$40.47	\$106.75
D6R w/ Winch			\$27.66	\$27.66
D7R	\$11,575.00	\$72.34	\$46.01	\$118.35
D8R	\$22,030.00	\$137.69	\$61.27	\$198.96
D9R	\$29,580.00	\$184.88	\$87.91	\$272.79
D10R	\$41,000.00	\$256.25	\$112.39	\$368.64
D11R	\$64,000.00	\$400.00	\$164.26	\$564.26
Wheeled Dozers				
824G			\$47.58	\$47.58
834G			\$55.77	\$55.77
844			\$66.39	\$66.39
854G			\$84.09	\$84.09
Motor Graders				
120H	\$9,790.00	\$61.19	\$38.75	\$99.94
14G/H	\$14,075.00	\$87.97	\$57.46	\$145.42
16G/H	\$22,000.00	\$137.50	\$71.27	\$208.77
24M			\$68.60	\$68.60
Track Excavators				
312C	\$5,380.00	\$33.63	\$16.71	\$50.34
320C	\$6,070.00	\$37.94	\$30.99	\$68.92
325C	\$8,490.00	\$53.06	\$39.76	\$92.82
330C	\$11,015.00	\$68.84	\$48.52	\$117.37
345B	\$14,565.00	\$91.03	\$61.19	\$152.22
365BL			\$58.42	\$58.42
385BL	\$22,950.00	\$143.44	\$97.41	\$240.84
Scrapers				
631G	\$25,295.00	\$158.09	\$96.47	\$254.57
637G	\$35,000.00	\$218.75	\$142.51	\$361.26
Wheeled Loaders				
924G	\$4,850.00	\$30.31	\$25.76	\$56.08
928G	\$5,300.00	\$33.13	\$29.84	\$62.97
950G	\$7,750.00	\$48.44	\$36.40	\$84.84
966G	\$11,115.00	\$69.47	\$48.86	\$118.33
972G	\$14,075.00	\$87.97	\$54.66	\$142.62
980G	\$14,075.00	\$87.97	\$62.60	\$150.57
988G	\$23,460.00	\$146.63	\$91.85	\$238.47
990			\$75.24	\$75.24
992G	\$63,000.00	\$393.75	\$173.19	\$566.94
994D			\$159.34	\$159.34
L2350			\$292.12	\$292.12
Shovels				
PC2000			\$163.76	\$163.76
PC3000			\$221.30	\$221.30
PC4000			\$309.82	\$309.82
PC5500			\$526.69	\$526.69
PC8000			\$659.47	\$659.47
Hydraulic Hammers				
H-120 (fits 325)	\$5,810.00	\$36.31	\$5.62	\$41.93
H-160 (fits 345)	\$12,240.00	\$76.50	\$10.98	\$87.48
H-180 (fits 365/385)	\$16,520.00	\$103.25	\$13.01	\$116.26
Demolition Shears				
S340 (fits 322/325/330)				\$0.00
S365 (fits 330/345)				\$0.00
S390 (fits 365/385)				\$0.00
Demolition Grapples				
G315 (fits 322/325)				\$0.00
G320 (fits 325/330)				\$0.00
G330 (fits 345/365)				\$0.00

Closure Cost Estimate Equipment Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

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Other Equipment				
420D 4WD Backhoe	\$2,700.00	\$16.88	\$21.97	\$38.85
428D 4WD Backhoe	\$3,450.00	\$21.56	\$21.84	\$43.40
CS533E Vibratory Roller	\$8,140.00	\$50.88	\$16.60	\$67.47
CS633E Vibratory Roller			\$21.02	\$21.02
CP533E Sheepsfoot Compactor			\$16.60	\$16.60
CP633E Sheepsfoot Compactor			\$21.02	\$21.02
Light Truck - 1.5 Ton	\$4,044.00	\$25.28	\$6.91	\$32.19
Supervisor's Truck	\$3,634.00	\$22.71	\$4.70	\$27.41
Flatbed Truck	\$4,044.00	\$25.28	\$22.31	\$47.59
Air Compressor + tools	\$5,749.00	\$35.93	\$4.43	\$40.36
Welding Equipment	\$3,036.00	\$18.98	\$8.85	\$27.83
Heavy Duty Drill Rig	\$32,802.00	\$205.01	\$53.11	\$258.12
Pump (plugging) Drill Rig	\$32,802.00	\$205.01	\$44.26	\$249.27
Concrete Pump	\$8,470.00	\$52.94	\$44.26	\$97.20
Gas Engine Vibrator	\$554.00	\$3.46	\$4.43	\$7.89
Generator 5KW	\$1,652.00	\$10.33	\$6.64	\$16.96
HDEP Welder (pipe or liner)	\$8,778.00	\$54.86	\$8.85	\$63.71
5 Ton Crane	\$7,779.00	\$48.62	\$13.28	\$61.90
20 Ton Crane	\$11,924.00	\$74.53	\$17.70	\$92.23
50 Ton Crane	\$11,924.00	\$74.53	\$20.80	\$95.33
120 Ton Crane			\$23.02	\$23.02
Trucks				
725	\$15,300.00	\$95.63	\$47.03	\$142.65
730	\$15,300.00	\$95.63	\$49.24	\$144.86
735	\$15,300.00	\$95.63	\$67.32	\$162.95
740	\$15,300.00	\$95.63	\$68.54	\$164.16
769D	\$21,650.00	\$135.31	\$57.92	\$193.23
773E	\$34,025.00	\$212.66	\$76.01	\$288.66
777D	\$55,700.00	\$348.13	\$108.43	\$456.55
785C			\$107.33	\$107.33
793C			\$184.79	\$184.79
797B			\$260.03	\$260.03
613E (5,000 gal) Water Wagon	\$6,630.00	\$41.44	\$35.49	\$76.93
621E (8,000 gal) Water Wagon	\$11,220.00	\$70.13	\$63.24	\$133.36
777D Water Truck			\$74.14	\$74.14
785C Water Truck			\$107.33	\$107.33
Dump Truck (10-12 yd ³)	\$11,814.00	\$73.84	\$24.05	\$97.89
NOTES:				
(1) Power Equipment Source:				
(2) Power Equipment Type:	Catepillar model or equivalent, LeTourneau loader, Komatsu shovels			
(3) Drilling Equipment Source:	RS Means Heavy Construction (2020 Q2)			
(4) Other Equipment Source:	RS Means Heavy Construction (2020 Q2)			
(5) Drill rig includes support (pipe) truck				

Closure Cost Estimate Equipment Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

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FUEL, LUBE AND WEAR CALCULATIONS						
EQUIPMENT TYPE	PM Cost Per Hour ⁽¹⁾	Under carriage or Tires ⁽²⁾	G.E.T Consumption ⁽³⁾	Fuel Use Rate gal/hr (4)	Cost@ 4.43/gal	Total Hourly Equipment Cost
Bulldozers						
D6R	\$7.63		\$5.18	6.25	\$27.66	\$40.47
D6R w/ Winch				6.25	\$27.66	\$27.66
D7R	\$7.63		\$5.18	7.50	\$33.20	\$46.01
D8R	\$8.05		\$10.07	9.75	\$43.15	\$61.27
D9R	\$9.18		\$15.66	14.25	\$63.07	\$87.91
D10R	\$10.80		\$21.92	18.00	\$79.67	\$112.39
D11R	\$14.71		\$32.26	26.50	\$117.29	\$164.26
Wheeled Dozers						
824G		\$0.00		10.75	\$47.58	\$47.58
834G		\$0.00		12.60	\$55.77	\$55.77
844		\$0.00		15.00	\$66.39	\$66.39
854G		\$0.00		19.00	\$84.09	\$84.09
Motor Graders						
120H	\$4.64	\$5.63	\$10.78	4.00	\$17.70	\$38.75
14G/H	\$5.78	\$8.43	\$15.58	6.25	\$27.66	\$57.46
16G/H	\$6.04	\$10.75	\$21.28	7.50	\$33.20	\$71.27
24M				15.50	\$68.60	\$68.60
Track Excavators						
312C	\$4.36		\$4.03	1.88	\$8.32	\$16.71
320C	\$4.65		\$4.65	4.90	\$21.69	\$30.99
325C	\$4.68		\$5.87	6.60	\$29.21	\$39.76
330C	\$5.77		\$6.46	8.20	\$36.29	\$48.52
345B	\$7.66		\$6.61	10.60	\$46.92	\$61.19
365BL				13.20	\$58.42	\$58.42
385BL	\$6.42		\$13.53	17.50	\$77.46	\$97.41
Scrapers						
631G	\$7.74	\$13.86	\$8.48	15.00	\$66.39	\$96.47
637G	\$12.87	\$13.86	\$10.66	23.75	\$105.12	\$142.51
Wheeled Loaders						
924G	\$3.53	\$5.59	\$4.47	2.75	\$12.17	\$25.76
928G	\$4.14	\$5.59	\$4.62	3.50	\$15.49	\$29.84
950G	\$5.15	\$4.95	\$8.60	4.00	\$17.70	\$36.40
966G	\$5.37	\$7.25	\$10.79	5.75	\$25.45	\$48.86
972G	\$6.07	\$7.25	\$13.67	6.25	\$27.66	\$54.66
980G	\$6.07	\$9.67	\$13.67	7.50	\$33.20	\$62.60
988G	\$11.37	\$12.27	\$14.65	12.10	\$53.55	\$91.85
990				17.00	\$75.24	\$75.24
992G	\$12.59	\$25.17	\$33.63	23.00	\$101.80	\$173.19
994D				36.00	\$159.34	\$159.34
L2350				66.00	\$292.12	\$292.12
Shovels						
PC2000				37.00	\$163.76	\$163.76
PC3000				50.00	\$221.30	\$221.30
PC4000				70.00	\$309.82	\$309.82
PC5500				119.00	\$526.69	\$526.69
PC8000				149.00	\$659.47	\$659.47
Hydraulic Hammers						
H-120 (fits 325)	N/A		\$5.62			\$5.62
H-160 (fits 345)	N/A		\$10.98			\$10.98
H-180 (fits 365/385)	N/A		\$13.01			\$13.01
Demolition Shears						
S340 (fits 322/325/330)	N/A					\$0.00
S365 (fits 330/345)	N/A					\$0.00
S390 (fits 365/385)	N/A					\$0.00

Closure Cost Estimate Equipment Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

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Demolition Grapples							
G315 (fits 322/325)		N/A					\$0.00
G320 (fits 325/330)		N/A					\$0.00
G330 (fits 345/365)		N/A					\$0.00
Other Equipment							
420D 4WD Backhoe	\$4.29	\$0.81	\$3.59	3.00	\$13.28		\$21.97
428D 4WD Backhoe	\$4.06	\$0.81	\$3.69	3.00	\$13.28		\$21.84
CS533E Vibratory Roller				3.75	\$16.60		\$16.60
CS633E Vibratory Roller				4.75	\$21.02		\$21.02
CP533E Sheepsfoot Compactor				3.75	\$16.60		\$16.60
CP633E Sheepsfoot Compactor				4.75	\$21.02		\$21.02
Light Truck - 1.5 Ton		\$0.27		1.50	\$6.64		\$6.91
Supervisor's Truck		\$0.27		1.00	\$4.43		\$4.70
Flatbed Truck		\$1.51		4.70	\$20.80		\$22.31
Air Compressor + tools			N/A	1.00	\$4.43		\$4.43
Welding Equipment			N/A	2.00	\$8.85		\$8.85
Heavy Duty Drill Rig				12.00	\$53.11		\$53.11
Pump (plugging) Drill Rig				10.00	\$44.26		\$44.26
Concrete Pump			N/A	10.00	\$44.26		\$44.26
Gas Engine Vibrator			N/A	1.00	\$4.43		\$4.43
Generator 5KW			N/A	1.50	\$6.64		\$6.64
HDEP Welder (pipe or liner)			N/A	2.00	\$8.85		\$8.85
5 Ton Crane				3.00	\$13.28		\$13.28
20 Ton Crane				4.00	\$17.70		\$17.70
50 Ton Crane				4.70	\$20.80		\$20.80
120 Ton Crane				5.20	\$23.02		\$23.02
Trucks							
725	\$8.53	\$14.47	\$3.22	4.70	\$20.80		\$47.03
730	\$8.53	\$14.47	\$3.22	5.20	\$23.02		\$49.24
735	\$8.53	\$23.04	\$3.22	7.35	\$32.53		\$67.32
740	\$8.53	\$24.26	\$3.22	7.35	\$32.53		\$68.54
769D	\$6.32	\$7.05	\$3.60	9.25	\$40.94		\$57.92
773E	\$7.82	\$12.14	\$4.04	11.75	\$52.01		\$76.01
777D	\$11.19	\$18.59	\$4.51	16.75	\$74.14		\$108.43
785C				24.25	\$107.33		\$107.33
793C				41.75	\$184.79		\$184.79
797B				58.75	\$260.03		\$260.03
613E (5,000 gal) Water Wagon	\$5.12	\$3.82		6.00	\$26.56		\$35.49
621E (8,000 gal) Water Wagon	\$7.24	\$8.42		10.75	\$47.58		\$63.24
777D Water Truck				16.75	\$74.14		\$74.14
785C Water Truck				24.25	\$107.33		\$107.33
Dump Truck (10-12 yd3) (5)	N/A	\$1.03	N/A	5.20	\$23.02		\$24.05
Notes:							
(1) PM Source:	Cashman Equipment Company (July 2020) unless noted						
(2) Undercarriage Source:	Purecell Tire Quote: June 2020						
(3) G.E.T. Source:	Cashman Equipment Company (July 2020) unless noted						
(4) Fuel Use Source:	Caterpillar Handbook, Edition 35, Ch. 20; or estimated average for smaller vehicles						
(5) Dump Truck Oper. Cost Source:	Means Heavy Construction (2008)						

Closure Cost Estimate Equipment Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
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TIRE COST TABLES						
Equipment	Tire Size	# of Tires Per Piece of Equipment	Cost Per Tire	Tire Cost ⁽¹⁾⁽²⁾	Life Expectancy Hours (Low/Zone A) ⁽³⁾	Tire Cost per Hour
Bulldozers						
D6R			N/A			
D6R w/ Winch			N/A			
D7R			N/A			
D8R			N/A			
D9R			N/A			
D10R			N/A			
D11R			N/A			
Wheeled Dozers						
824G	29.5R25	4		\$0.00	3,500	\$0.00
834G	35/65-R33	4		\$0.00	3,500	\$0.00
844	45/65-R39	4		\$0.00	3,500	\$0.00
854G	45/65-R45	4		\$0.00	3,500	\$0.00
Motor Graders						
120H	13PR24	6	\$3,282.50	\$19,695.00	3,500	\$5.63
14G/H	20.5R25	6	\$4,919.50	\$29,517.00	3,500	\$8.43
16G/H	23.5R25	6	\$6,272.90	\$37,637.40	3,500	\$10.75
24M	23.5R25	6		\$0.00	3,500	
Track Excavators						
312C			N/A			
320C			N/A			
325C			N/A			
330C			N/A			
345B			N/A			
365BL			N/A			
385BL			N/A			
Scrapers						
631G	37.25R35	4	\$13,862.80	\$55,451.20	4,000	\$13.86
637G	37.25R35	4	\$13,862.80	\$55,451.20	4,000	\$13.86
Wheeled Loaders						
924G	17.5R25	4	\$6,292.00	\$25,168.00	4,500	\$5.59
928G	17.5R25	4	\$6,292.00	\$25,168.00	4,500	\$5.59
950G	26.5R25	4	\$5,565.40	\$22,261.60	4,500	\$4.95
966G	26.5R25	4	\$8,160.20	\$32,640.80	4,500	\$7.25
972G	26.5R25	4	\$8,160.20	\$32,640.80	4,500	\$7.25
980G	29.5R25	4	\$10,873.40	\$43,493.60	4,500	\$9.67
988G	35/65-33	4	\$13,808.70	\$55,234.80	4,500	\$12.27
990	41.25/70-39	4		\$0.00	4,500	
992G	45/65R45	4	\$28,316.00	\$113,264.00	4,500	\$25.17
994D	55/85R57	4		\$0.00	4,500	
L2350	55/85R57	4		\$0.00	4,500	
Shovels						
PC2000			N/A			
PC3000			N/A			
PC4000			N/A			
PC5500			N/A			
PC8000			N/A			
Hydraulic Hammers						
H-120 (fits 325)			N/A			
H-160 (fits 345)			N/A			
H-180 (fits 365/385)			N/A			
Demolition Shears						
S340 (fits 322/325/330)			N/A			
S365 (fits 330/345)			N/A			
S390 (fits 365/385)			N/A			
Demolition Grapples						
G315 (fits 322/325)			N/A			
G320 (fits 325/330)			N/A			
G330 (fits 345/365)			N/A			

Closure Cost Estimate Equipment Costs

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Other Equipment						
420D 4WD Backhoe	340/80R18-19.5LR24	2	\$1,221.10	\$2,442.20	3,000	\$0.81
428D 4WD Backhoe	340/80R18-16.9R28	2	\$1,221.10	\$2,442.20	3,000	\$0.81
CS533E Vibratory Roller			N/A			
CS633E Vibratory Roller			N/A			
CP533E Sheepsfoot Compactor			N/A			
CP633E Sheepsfoot Compactor			N/A			
Light Truck - 1.5 Ton		4	206.2	\$824.80	3,000	\$0.27
Supervisor's Truck		4	206.2	\$824.80	3,000	\$0.27
Flatbed Truck		22	206.2	\$4,536.40	3,000	\$1.51
Air Compressor + tools			N/A			
Welding Equipment			N/A			
Heavy Duty Drill Rig		4		\$0.00	3,000	
Pump (plugging) Drill Rig		4		\$0.00	3,000	
Concrete Pump			N/A			
Gas Engine Vibrator			N/A			
Generator 5KW			N/A			
HDEP Welder (pipe or liner)			N/A			
5 Ton Crane		4		\$0.00	3,000	
20 Ton Crane		4		\$0.00	3,000	
50 Ton Crane		6		\$0.00	3,000	
120 Ton Crane		6		\$0.00	3,000	
Trucks						
725	23.5R25	6	\$4,824.30	\$28,945.80	2,000	\$14.47
730	23.5R25	6	\$4,824.30	\$28,945.80	2,000	\$14.47
735	26.5R25	6	\$7,681.00	\$46,086.00	2,000	\$23.04
740	29.5R25	6	\$8,086.20	\$48,517.20	2,000	\$24.26
769D	18.00R33	6	\$7,054.80	\$42,328.80	6,000	\$7.05
773E	24.00R35	6	\$10,119.20	\$60,715.20	5,000	\$12.14
777D	27.00R49	6	\$15,494.70	\$92,968.20	5,000	\$18.59
785C	33.00R51	6		\$0.00	4,000	
793C	40.00R57	6		\$0.00	4,000	
797B	40.00R57	6		\$0.00	4,000	
613E (5,000 gal) Water Wagon	23.5R25	6	\$3,818.10	\$22,908.60	6,000	\$3.82
621E (8,000 gal) Water Wagon	33.25R29	6	\$11,223.35	\$67,340.10	8,000	\$8.42
777D Water Truck	27.00R49	6		\$0.00	5,000	
785C Water Truck	33.00R51	6		\$0.00	4,000	
Dump Truck (10-12 yd3)		10	\$619.90	\$6,199.00	6,000	\$1.03
Notes:						
(1) Unit Cost Basis:	Cost per set					
(2) Cost Basis:	Total cost for all required tires					
(3) Tire Cost Source:	Purecell Tire Quote: June 2020					
(4) Tire Wear Source:	Caterpillar Handbook, Edition 35; CH 20					

Closure Cost Estimate Material Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

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Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Revegetation Materials			
Seed Mixes			
Seed Mix	Description	Cost/Acre	
None			
Mix 1	Basins	\$302.50	
Mix 2	Low Hills	\$332.75	
Mix 3	Uplands	\$363.00	
Mix 4	Riparian or Custom	\$393.25	
User Mix 1			
User Mix 2			
User Mix 3			
User Mix 4			
	Cost/lb	lbs/Acre	Cost/Acre
User Mix 5 (from Seed Mix sheet)	#DIV/0!	\$0.00	\$0.00
Notes:			
Mulch			
Item	Cost/lb	lbs/Acre	Cost/Acre
None			
Straw Mulch	\$0.17		
Hydro Mulch	\$0.25		
Timber Mulch			
Notes:	Granite Seed \$500 per ton in 50lb bag Wood (hydro) mulch (June 2020)		

Closure Cost Estimate Material Costs

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Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety **Cost Basis:** Southern Nevada - Adjusted for Arizona

Amendments			
Item	Cost/lb	lbs/Acre	Cost/Acre
None			
Organic Matter	\$0.70		\$0.00
Treated Sludge			
Chemical	\$0.59		\$0.00
Notes:	Western Nevada Supply \$29.34 per 50lb bag 15-15-15 (June 2020)		

Closure Cost Estimate

Material Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

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Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety **Cost Basis: Southern Nevada - Adjusted for Arizona**

Well Abandonment Materials

Description	Cost/50lb bag	Units	Cost/unit*
Cement	\$7.57	cy	\$36.05
Grout (Low Grade Bentonite)	\$8.85	cy	\$42.14
Inert Material/Cuttings		cy	
		cy	
		cy	
(1) Jentech Drilling Supply quote (June 2020) Type I, II Cement at \$14.24 per 94lb bag			
(2) Jentech Drilling Supply (June 2020) 3/8 in. Chunk Bentonite Hole Plug at \$8.85 per 50 lb. bag (5.7			
* Assumes 1 bag mixes with water to make 0.21 y3 or 0.16 m3 of grout/cement slurry.			

Monitoring Costs

Description	Units	Cost/unit
Monitor Well Pump	ea.	\$2,788.41
Sampling Supplies	ea.	\$6.51
Water Analysis (Profile I) (1)	ea.	\$411.00
Leach Test (MWMP) w/ analysis	ea.	\$483.40
ABA + S speciation	ea.	\$150.00
WAD Cyanide in water	ea.	\$56.00
Water Analysis (Profile II) (1)	ea.	\$461.00
	ea.	
	ea.	
	ea.	
	ea.	
	ea.	
	ea.	
	ea.	
	ea.	
	ea.	
(1) WET Lab, Reno, Nevada (July 2020)		
Well pump and Sample supply costs adjusted to 2020.		
Original source unknown.		

Closure Cost Estimate Material Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Fuel, Etc.		
Description	Units	Cost/unit
Off-road Diesel - delivered (1)	\$/gal	\$4.426
Pickup Truck Mileage	\$/mi	\$0.580
Electical Power	\$/kWh	\$0.080
(1) Source: AZ Tucson Fuel Cost, adjusted for red dye diesel		
Source: Federal Government Vehicle Allowance Rate 2020		
Source: NV Energy (July 2020) \$0.07872		

Closure Cost Estimate Material Costs

Revegetation Method				
Slopes				
Disturbance Type	Seed Application Method	Labor Cost/Acre	Equipment Cost/Acre	Total Cost/Acre
Waste Rock Dumps	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Heap Leach	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Tailings	Hand Broadcast	\$140.00	\$50.00	\$190.00
Quarries & Borrow Pits	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Flat Areas and Undifferentiated				
Disturbance Type	Seed Application Method	Labor Cost/Acre	Equipment Cost/Acre	Total Cost/Acre
Exploration Trenches	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Exploration Roads	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Waste Rock Dumps	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Heap Leach	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Tailings	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Quarries & Borrow Pits	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Roads	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Pits	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Haul Material	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Foundations & Buildings	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Sediment & Drainage Control	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Process Ponds	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Landfills	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Yards, Etc.	Mechanical Broadcast	\$140.00	\$50.00	\$190.00
Revegetation Maintenance	Mechanical Broadcast	\$140.00	\$50.00	\$190.00

**Closure Cost Estimate
Misc. Unit Costs**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
 Date of Submittal: May 3, 2022
 File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Revegetation										
	Means Number	Unit	Crew	Daily Output	Daily Output User	Materials	Labor	Equipment	Total	Notes
Seeding - Broadcast Hand (1)		acres					\$140.00	\$50.00	\$190.00	
Seeding - Broadcast Mechanical (1)		acres					\$140.00	\$50.00	\$190.00	
Seeding - Drill (1)		acres		365			\$140.00	\$120.00	\$260.00	
Seeding - Hydroseeding (1)				365			\$250.00	\$150.00	\$400.00	
Shrub Planting - bare root 6-10 in (150- 250mm) (2)	02910-400-0561	ea.	1 Clab	365					\$0.00	
Tree Planting - bare root 11-16 in (270- 400mm) (3)	02910-400-0562	ea.	1 Clab	260					\$0.00	
Cactus Planting (4)		ea.	1 Clab						\$0.00	
NOTES:										
(1) Seeding Source:	Source: Kelley Erosion Control (July 2020).									
(2) Shrub Source:										
(3) Tree Source:										
(4) Cactus Source:										
Building and Wall Demolition										
Hourly productivity rates and crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data .										
All equipment, labor and material unit costs are from Labor Costs, Equipment Costs and Material Costs spreadsheets										
	Means Number	Unit	Crew	Daily Output	Daily Output User	Labor	Equipment	Premium	Total	Notes
Building Demolition										
Lg. steel	02220-110-0012	C.F.	B-8	21500		\$0.22	\$0.13		\$0.35	
Lg. concrete	02220-110-0050	C.F.	B-8	15300		\$0.31	\$0.18		\$0.49	
Lg. masonry	02220-110-0080	C.F.	B-8	20100		\$0.23	\$0.14		\$0.37	
Lg. mixed	02220-110-0100	C.F.	B-8	20100		\$0.23	\$0.14		\$0.37	
Sm. steel	02220-110-0500	C.F.	B-3	14800		\$0.27	\$0.14		\$0.41	
Sm. concrete	02220-110-0600	C.F.	B-3	11300		\$0.35	\$0.18		\$0.53	
Sm. masonry	02220-110-0650	C.F.	B-3	14800		\$0.27	\$0.14		\$0.41	
Sm. wood	02220-110-0700	C.F.	B-3	14800		\$0.27	\$0.14		\$0.41	
Wall Demolition										
Block 4 in (100 mm) thick	02220-130-2000	S.F.	1 Clab	180		\$3.03	\$0.00	20%	\$3.64	
Block 6 in (150 mm) thick	02220-130-2040	S.F.	1 Clab	170		\$3.20	\$0.00	20%	\$3.84	
Block 8 in (200 mm) thick	02220-130-2080	S.F.	1 Clab	150		\$3.63	\$0.00	20%	\$4.36	
Block 12 in (300 mm) thick	02220-130-2100	S.F.	1 Clab	150		\$3.63	\$0.00	20%	\$4.36	
Conc 6 in (150 mm) thick	02220-130-2400	S.F.	B-9	160		\$24.52	\$2.02	10%	\$29.19	
Conc 8 in (200 mm) thick	02220-130-2420	S.F.	B-9	140		\$28.02	\$2.31	10%	\$33.36	
Conc 10 in (250 mm) thick	02220-130-2440	S.F.	B-9	120		\$32.69	\$2.69	10%	\$38.92	
Conc 12 in (300 mm) thick	02220-130-2500	S.F.	B-9	100		\$39.23	\$3.23	10%	\$46.71	

**Closure Cost Estimate
Misc. Unit Costs**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Waste Disposal										
Unit rates from Means Heavy Construction 2006 Edition by permission of R.S.Means/Reed Construction Data .										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment		Total	Notes
Rubbish Handling										
Dumpster delivery (average for all sizes)	02220-350-0910	ea.			\$51.50				\$51.50	
Haul (average for all sizes)	02220-350-0920	ea.			\$161.00				\$161.00	
Rent per month (average for all sizes)	02220-350-0940	ea.			\$55.00				\$55.00	
Disposal fee per ton (tonne) (average for all sizes)	02220-350-0950	ton			\$60.50				\$60.50	
NOTES:										
Dumpster Cost Source:	R.S. Means Heavy Construction (2020 Q2).									
Dumpster Disposal Fee Source:	R.S. Means Heavy Construction (2020 Q2).									
Hazardous Material Handling - Solids (+ Liquids in drums)										
Pickup fees 55 gal (200 L). drums	02110-300-1100	ea.			\$251.00				\$251.00	
Bulk material (average)	02110-300-1220/1230	ton			\$409.50				\$409.50	
Transport - truck load (80 drums, 25 cy (m3), 18 tons)	02110-300-1260/1270	mile			\$5.88				\$5.88	
Dump site solid disposal fee	02110-300-6000/6020	ton			\$288.50				\$288.50	
NOTES:										
Solid Handling Cost Source:	R.S. Means Heavy Construction (2019 Q2).									
Solid Disposal Fee Source:	2019 Q2 R.S. Means Heavy Const. ave. 02 81									
Hazardous Material Handling - Liquids										
Vacuum Truck Pickup (2200 gal/8300 L)	02110-300-3110	hr.			\$147.00				\$147.00	
Vacuum Truck Pickup (5000 gal/19000 L)	02110-300-3120	hr.			\$213.00				\$213.00	
Dump site liquid disposal fee	02110-300-6000/6020	ton			\$288.50				\$288.50	
NOTES:										
Liquid Handling Cost Source:	R.S. Means Heavy Construction (2020 Q2).									
Liquid Disposal Fee Source:	2020 Q2 R.S. Means Heavy Const. ave. 02 81									
Hydrocarbon Contaminated Soils (HCS)										
Insitu Biotreatment	02115-200-2020/2021	C.Y.			\$17.64				\$17.64	
HCS disposal fee	02115-200-2050/2055	C.Y.			\$278.50				\$278.50	
NOTES:										
Insitu Treatement Cost Source:	2020 Q2 RS Means Heavy Const., ave. 02 65									
HCS Disposal Fee Source:	2020 Q2 R.S. Means Heavy Const., ave. 02 65									

Closure Cost Estimate Misc. Unit Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm

Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Concrete Structure Installation										
Weekly dumpster rental rates from Means Heavy Construction 2005 Edition with permission by R.S.Means/Reed Construction Data . Weekly dumpster rental rates include haul to off-site disposal site and disposal fees										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment	Premium	Total	Notes
Reinforced Concrete Bulkheads and Shaft Covers										
Grade walls - 15 in (400mm) thick, 8 ft (2.5m) high	03310-240-4300	C.Y.	C-14D	80.02	\$163.00	\$187.60	\$13.25		\$363.85	includes reinforcing
Grade walls - 15 in (400mm) thick, 12 ft (3.7m) high	03310-240-4350	C.Y.	C-14D	26.2	\$163.00	\$572.96	\$40.46		\$776.42	includes reinforcing
Elevated conc. 1-way beam & slab - 15ft (4.6m) span	03310-240-2700	C.Y.	C-14B	20.59	\$278.00	\$751.72	\$51.48		\$1,081.20	includes reinforcing
Elevated conc. 1-way beam & slab - 25ft (7.5m) span	03310-240-2750	C.Y.	C-14B	28.36	\$265.00	\$545.77	\$37.38		\$848.15	includes reinforcing
Bat Gate/Foam Plug Installation										
Bat Gate (5)		ea.			\$3,367.61					materials \$/ea. Installed
Culvert Gate (5)		ea.			\$6,735.21					materials \$/ea. Installed
Adit Foam Plug (6)		ea./C.Y.			\$336.76					materials \$/cy placed
Production Opening Foam Plug (6)		ea./C.Y.			\$336.76					materials \$/cy placed
NOTES:										
(5) Bat Gate Source:	NV BLM, 2/2006: 8 hr + 1hr mob/demob + 1hr setup per gate (adjusted to 2020)									
(6) Foam Plug Source:	NV BLM, 2/2006: 8 hr+ 1hr mob/demob + 1hr setup per adit; 16 hrs per production opening (adjusted to 2020)									

Closure Cost Estimate Misc. Unit Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

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Model Version: Version 1.4.1

Cost Data: User Data

Cost Data File: SRCE_Cost_data-USR_1_12.xlsm

Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Misc. Linear Projects										
Hourly productivity rates and crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data . All equipment, labor and material unit costs are from Labor Costs, Equipment Costs and Material Costs spreadsheets										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment	Premium	Total	Notes
Fencing Installation										
Barbed 3-strand	02820-170-1650	L.F.	B-80A	760	\$0.51	\$2.15	\$0.34		\$3.00	
Barbed 4-strand	extrapolated	L.F.	B-80A	570	\$0.68	\$2.87	\$0.45		\$4.00	
Barbed 5-strand	02820-130-0920	L.F.	B-80A	456	\$0.85	\$3.58	\$0.56		\$4.99	
Chain link 8-10ft (2.5-3m) Install	02820-130-0920	L.F.	B-80C	180	\$38.00	\$9.08	\$1.43		\$48.51	
Wood stockade fence 6 ft (2 m) high - Install	02820-510-1240	L.F.	B-80C	150	\$16.00	\$10.89	\$1.72		\$28.61	
	user	L.F.							\$0.00	
	user	L.F.							\$0.00	
	user	L.F.							\$0.00	
	user	L.F.							\$0.00	
Fencing Removal										
Barbed 3-strand Removal	02220-220-1600	L.F.	2 Clab	430		\$2.53	\$0.60		\$3.13	
Barbed 4-strand Removal	extrapolated	L.F.	2 Clab	355		\$3.07	\$0.73		\$3.80	
Barbed 5-strand Removal	02220-220-1650	L.F.	2 Clab	280		\$3.89	\$0.92		\$4.81	
Chain link 8-10 ft (2.5-3 m) Removal	02220-220-1700	L.F.	B-6	445		\$4.06	\$1.13		\$5.19	
Wood, all types 4-6 ft ("1.5-2 m) high - Removal	02220-220-1775	L.F.	2 Clab	430		\$2.53	\$0.60		\$3.13	
	user	L.F.								
	user	L.F.							\$0.00	
	user	L.F.							\$0.00	
	user	L.F.							\$0.00	
Culvert Removal										
12 in (300 mm) Diameter	02220-220-2900	L.F.	B-6	175		\$10.33	\$2.88		\$13.21	
18 in (450 mm) Diameter	02220-220-2930	L.F.	B-6	150		\$12.05	\$3.36		\$15.41	
24 in (600 mm) Diameter	02220-220-2960	L.F.	B-6	120		\$15.06	\$4.20		\$19.26	
36 in (1m) Diameter	02220-220-3000	L.F.	B-6	90		\$20.08	\$5.60		\$25.68	
Pipeline Removal										
0.75 in (20mm) - 4 in (100 mm) diameter	02220-381-1600	L.F.	B-20	700		\$3.07	\$0.37		\$3.44	
6 in (150 mm) - 8 in (200 mm)	02220-381-1700	L.F.	B-20	500		\$4.30	\$0.52		\$4.82	
10 in (250 mm) - 18 in (450 mm)	02220-381-1800	L.F.	B-20	300		\$7.16	\$0.86		\$8.02	
20 in (500 mm) - 36 in (1 m)	02220-381-1900	L.F.	B-20	200		\$10.75	\$1.29		\$12.04	
Pipe and Drainpipe Installation										
Water 4in (100mm) 40ft (12m) length, welded HDPE	02510-760-0100	L.F.	B-22A	400	\$2.70	\$7.70	\$5.40		\$15.80	
Water 6in (150mm) 40ft (12m) length, welded HDPE	02510-760-0200	L.F.	B-22A	380	\$5.85	\$8.10	\$5.69		\$19.64	
Water 12in (300mm) 40ft (12m) length, welded HDPE	02510-760-0500	L.F.	B-22A	260		\$11.84	\$8.31		\$20.15	
Drain 4in (100mm) perforated PVC	02620-630-2100	L.F.	B-14	315	\$1.74	\$12.55	\$1.80		\$16.09	
Drain 6in (150mm) perforated PVC	02620-630-2110	L.F.	B-14	300	\$4.22	\$13.18	\$1.89		\$19.29	
Drain 4in (100mm) corrugated, perf or plain	02620-660-0040	L.F.	2 Clab	1200	\$0.78	\$0.91	\$0.21		\$1.90	
Drain 6in (150mm) corrugated, perf or plain	02620-660-0060	L.F.	2 Clab	900	\$2.18	\$1.21	\$0.29		\$3.68	

**Closure Cost Estimate
Misc. Unit Costs**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Drain Rock Preparation										
Crushing		C.Y.							\$0.50	
Screening		C.Y.							\$0.50	
TOTAL									\$1.00	
Misc.										
Backhoe work	02210-700-0120	C.Y.	B-11M	28		\$25.63	\$11.10		\$36.73	
Powerline and Transformer Removal										
Single Pole		mile							\$46,804.00	
Double Pole		mile							\$53,490.00	
Transformer (9)		ea.							\$58,997.00	
NOTES:										
(7) Single Pole Source:	NV Energy estimate (2009) Adjusted to 2020									
(8) Double Pole Source:	NV Energy estimate (2009) Adjusted to 2020									
(9) Transformer Source:	NV Energy estimate (2009) Adjusted to 2020									
Erosion and Sedimentation Control										
Hourly productivity rates and crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data .										
All equipment, labor and material unit costs are from Labor Costs, Equipment Costs and Material Costs spreadsheets										
	Means Number	Unit	Crew	Daily Output	Materials	Labor	Equipment	Premium	Total	Notes
Rip-Rap & Rock Lining										
Rip-Rap 3/8 to 1/4 CY (m3) pieces, grouted	02370-450-0110	S.Y.	B-13	80	\$25.00	\$49.43	\$9.22		\$83.65	assumes on-site source of rip-rap
Rip-Rap 18 in (450 mm) min thick, no grout	02370-450-0200	S.Y.	B-13	53	\$7.65	\$74.61	\$13.92		\$96.18	assumes on-site source of rip-rap
Gabions, 6 in (150 mm) deep	02370-450-0400	S.Y.	B-13	200	\$7.05	\$19.77	\$3.69		\$30.51	assumes on-site source rock fill for gabions
Gabions, 9 in (250 mm) deep	02370-450-0500	S.Y.	B-13	163	\$9.85	\$24.26	\$4.53		\$38.64	assumes on-site source rock fill for gabions
Gabions, 12 in (300 mm) deep	02370-450-0200	S.Y.	B-13	153	\$14.30	\$25.84	\$4.82		\$44.96	assumes on-site source rock fill for gabions
Gabions, 18 in (450 mm) deep	02370-450-0200	S.Y.	B-13	102	\$18.35	\$38.77	\$7.23		\$64.35	assumes on-site source rock fill for gabions
Gabions, 36 in (1m) deep	02370-450-0200	S.Y.	B-13	60	\$31.00	\$65.90	\$12.30		\$109.20	assumes on-site source rock fill for gabions
HDEP Liner Installation										
Finish grading large area	2310-100-0100	S.F.	B-11L	18000		\$0.07	\$0.06		\$0.13	
Compaction-riding, vibrating roller - 12in (300mm) lifts	2315-310-5100	C.Y.	B-10Y	2600		\$0.48	\$0.21		\$0.69	
60 mil HDPE	2660-610-0010	S.F.	3 Skwk	1600	\$0.57	\$1.47	\$0.51		\$2.55	
80 mil HDPE	user	S.F.	3 Skwk	149		\$15.82	\$5.51		\$21.33	
40 mil VLDPE	user	S.F.	3 Skwk	150		\$15.72	\$5.47		\$21.19	
	user	S.F.	3 Skwk	149		\$15.82	\$5.51		\$21.33	
	user	S.F.	3 Skwk	149		\$15.82	\$5.51		\$21.33	

Closure Cost Estimate Misc. Unit Costs

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan

Date of Submittal: May 3, 2022

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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Construction Management Support										
Office Trailer, Furnished, no hook-ups	0150-500-0250	mo.				\$198.00				\$198.00
Toilet Portable, chemical	1590-400-6410	mo.				\$214.20				\$214.20
TOTAL						\$412.20				\$412.20
Pump and Casing Removal										
	Pump Type	Measurement	Unit				Labor	Equipment	Total	Notes
Pump Removal										
Submersible	ft to pump	L.F.					\$7.65	\$18.86	\$26.51	
Line Shaft	ft to pump	L.F.					\$7.65	\$18.86	\$26.51	
NOTES:										
(10) Pump Removal Source:		Boart Longyear Quote: June 2020								

**Closure Cost Estimate
Fleets (Crews)**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

EQUIPMENT FLEETS					
ACTIVITY AND FLEET		Standard Crew Size	EQUIPMENT UNIT COST (Hourly)	TOTAL LABOR UNIT COST (Hourly)	TOTAL COST (Hourly)
RIPPING					
Rip road Waste rock dumps, heaps, tails - rip flat surfaces Surface preparation Scarify					
Small Dozer w/ multi-shank					
D7R		1	\$118.35	\$90.77	\$209.12
Totals			\$118.35	\$90.77	\$209.12
Medium Dozer w/ multi-shank					
D9R		1	\$272.79	\$90.77	\$363.56
Totals			\$272.79	\$90.77	\$363.56
Large Dozer w/ multi-shank					
D10R		1	\$368.64	\$90.77	\$459.41
Totals			\$368.64	\$90.77	\$459.41
Grader w/ multi-shank					
16G/H		1	\$208.77	\$90.20	\$298.97
Totals			\$208.77	\$90.20	\$298.97
GRADING					
Grading storage and structure areas Grading waste rock dumps and heaps Grading landfills Constructing pit safety berms					
Small Dozer Fleet					
D7R		1	\$118.35	\$90.77	\$209.12
Totals			\$118.35	\$90.77	\$209.12
Medium Dozer Fleet					
D9R		1	\$272.79	\$90.77	\$363.56
Totals			\$272.79	\$90.77	\$363.56
Large Dozer Fleet					
D10R		1	\$368.64	\$90.77	\$459.41
Totals			\$368.64	\$90.77	\$459.41
EXPLORATION GRADING					
Backfilling and grading exploration trenches Grading flat exploration roads					
Small Dozer Fleet					
D6R		1	\$106.75	\$90.77	\$197.52
Totals			\$106.75	\$90.77	\$197.52
Medium Dozer Fleet					
D7R		1	\$118.35	\$90.77	\$209.12
Totals			\$118.35	\$90.77	\$209.12
Large Dozer Fleet					
D8R		1	\$198.96	\$90.77	\$289.73
Totals			\$198.96	\$90.77	\$289.73

**Closure Cost Estimate
Fleets (Crews)**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

EQUIPMENT FLEETS					
ACTIVITY AND FLEET		Standard Crew Size	EQUIPMENT UNIT COST (Hourly)	TOTAL LABOR UNIT COST (Hourly)	TOTAL COST (Hourly)
EXCAVATING					
Earthen Berms Diversion ditch excavation and backfill Underground openings backfill - excavate and place Pit berm construction (excavator option)					
Small Excavator					
325C		1	\$92.82	\$90.20	\$183.02
Totals			\$92.82	\$90.20	\$183.02
Medium Excavator					
345B		1	\$152.22	\$90.20	\$242.42
Totals			\$152.22	\$90.20	\$242.42
Large Excavator					
385BL		1	\$240.84	\$90.20	\$331.04
Totals			\$240.84	\$90.20	\$331.04
EXCAVATE AND RECONTOUR					
Recontour large roads (haul roads, access roads, etc.) Ponds - Excavate and pull liner and bury					
Small Excavator + Dozer					
325C		1	\$92.82	\$90.20	\$183.02
D7R		1	\$118.35	\$90.77	\$209.12
Total Equipment			\$211.17	\$180.97	\$392.14
Medium Excavator + Dozer					
345B		1	\$152.22	\$90.20	\$242.42
D9R		1	\$272.79	\$90.77	\$363.56
Totals			\$425.01	\$180.97	\$605.98
Large Excavator + Dozer					
385BL		1	\$240.84	\$90.20	\$331.04
D10R		1	\$368.64	\$90.77	\$459.41
Totals			\$609.48	\$180.97	\$790.45
EXPLORATION ROAD/PAD RECONTOUR					
Recontour small roads (exploration roads, service roads, etc.) Cut and Fill reclamation on slopes Drill pad recontour Drill sump backfill					
Small Dozer					
D6R		1	\$106.75	\$90.77	\$197.52
Totals			\$106.75	\$90.77	\$197.52
Large Dozer					
D8R		1	\$198.96	\$90.77	\$289.73
Totals			\$198.96	\$90.77	\$289.73
Grader					
14G/H		1	\$145.42	\$90.20	\$235.62
Totals			\$145.42	\$90.20	\$235.62
Small Excavator					
320C		1	\$68.92	\$90.20	\$159.12
Totals			\$68.92	\$90.20	\$159.12
Medium Excavator					
325C		1	\$92.82	\$90.20	\$183.02
Totals			\$92.82	\$90.20	\$183.02

**Closure Cost Estimate
Fleets (Crews)**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

EQUIPMENT FLEETS					
ACTIVITY AND FLEET		Standard Crew Size	EQUIPMENT UNIT COST (Hourly)	TOTAL LABOR UNIT COST (Hourly)	TOTAL COST (Hourly)
LOAD, HAUL AND PLACE MATERIAL					
Rock placement Haul overburden for backfill Haul borrow for backfill Haul cover or growth media					
Small Truck/Loader Fleet					
725		Calculated	\$142.65	\$68.43	\$211.08
966G	Loader	1	\$118.33	\$89.72	\$208.05
D7R		1	\$118.35	\$90.77	\$209.12
Totals			\$379.33	\$248.92	\$628.25
Medium Truck/Loader Fleet					
740		Calculated	\$164.16	\$68.43	\$232.59
988G	Loader	1	\$238.47	\$90.00	\$328.47
D8R		1	\$198.96	\$90.77	\$289.73
Totals			\$601.59	\$249.20	\$850.79
Large Truck/Loader Fleet					
769D		Calculated	\$193.23	\$68.43	\$261.66
988G	Loader	1	\$238.47	\$90.00	\$328.47
D7R		1	\$118.35	\$90.77	\$209.12
Totals			\$550.05	\$249.20	\$799.25
Extra Large Truck/Loader Fleet					
777D		Calculated	\$456.55	\$68.43	\$524.98
992G	Loader	1	\$566.94	\$90.00	\$656.94
D7R		1	\$118.35	\$90.77	\$209.12
Totals			\$1,141.84	\$249.20	\$1,391.04
Scraper/Dozer Fleet					
631G		Calculated	\$254.57	\$90.20	\$344.77
D10R		1	\$368.64	\$90.77	\$459.41
D7R		1	\$118.35	\$90.77	\$209.12
Totals			\$741.56	\$271.74	\$1,013.30
Tandem Scraper Fleet					
637G		2	\$361.26	\$90.20	\$451.46
D7R		1	\$118.35	\$90.77	\$209.12
Totals			\$479.61	\$180.97	\$660.58
MISC. LOAD AND HAUL AND EARTHWORKS					
Sludge removal Drainage controls					
Misc. - Cat 325B Excavator / 10-12 yd3 Truck					
325C		1	\$92.82	\$90.20	\$183.02
Dump Truck (10-12 yd3)		1	\$97.89	\$68.43	\$166.32
Totals			\$190.71	\$158.63	\$349.34
Misc. - Cat D9R Dozer/ Loader (5 yd3) / 10-12 yd3 Truck					
D9R		1	\$272.79	\$90.77	\$363.56
966G		1	\$118.33	\$89.72	\$208.05
Dump Truck (10-12 yd3)		1	\$97.89	\$68.43	\$166.32
Totals			\$489.01	\$248.92	\$737.93
Misc. - Cat D6 Dozer / Cat 966 Loader / 10-12 yd3 Truck					
D6R		1	\$106.75	\$90.77	\$197.52
966G		1	\$118.33	\$89.72	\$208.05
Dump Truck (10-12 yd3)		1	\$97.89	\$68.43	\$166.32
Totals			\$322.97	\$248.92	\$571.89

**Closure Cost Estimate
Fleets (Crews)**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
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Model Version: Version 1.4.1
Cost Data: User Data
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

EQUIPMENT FLEETS					
ACTIVITY AND FLEET		Standard Crew Size	EQUIPMENT UNIT COST (Hourly)	TOTAL LABOR UNIT COST (Hourly)	TOTAL COST (Hourly)
CONCRETE BREAKING					
Slab demolition Footing demolition Wall demolition					
Small - Cat 325B Excavator w/ H140D s Hammer					
325C		1	\$92.82	\$90.20	\$183.02
H-120 (fits 325)		1	\$41.93	\$0.00	\$41.93
D9R		1	\$272.79	\$90.77	\$363.56
Totals			\$407.54	\$180.97	\$588.51
Medium - Cat 345B Excavator w/ H180D s Hammer					
345B		1	\$152.22	\$90.20	\$242.42
H-160 (fits 345)		1	\$87.48	\$0.00	\$87.48
D9R		1	\$272.79	\$90.77	\$363.56
Totals			\$512.49	\$180.97	\$693.46
Large - Cat 385B Excavator w/ H180D s Hammer					
385BL		1	\$240.84	\$90.20	\$331.04
H-180 (fits 365/385)		1	\$116.26	\$0.00	\$116.26
D9R		1	\$272.79	\$90.77	\$363.56
Totals			\$629.89	\$180.97	\$810.86
DRILL HOLE ABANDONMENT					
Drill Hole - Grout or Cement					
Pump (plugging) Drill Rig		1	\$249.27	\$89.78	\$339.05
Driller's Helper		2	\$0.00	\$137.32	\$137.32
Totals			\$249.27	\$227.10	\$476.37
Drill Hole - Inert Media (Means Crew B-11M+ 1 Laborer)					
420D 4WD Backhoe		1	\$38.85	\$89.72	\$128.57
General Laborer		1	\$0.00	\$68.07	\$68.07
Totals			\$38.85	\$157.79	\$196.64
Drill Hole - Casing Perforation or Removal					
Heavy Duty Drill Rig		1	\$258.12	\$89.78	\$347.90
Driller's Helper		2	\$0.00	\$137.32	\$137.32
Totals			\$258.12	\$227.10	\$485.22
MAINTENANCE FLEET					
Road Grading, Dust Suppression, Clean Up					
Maintenance - Small Water Truck and Cat 14G Grader					
613E (5,000 gal) Water Wagon		1	\$76.93	\$68.43	\$145.36
120H		1	\$99.94	\$90.20	\$190.14
Totals			\$176.87	\$158.63	\$335.50
Maintenance - Medium Water Truck and Cat 16G Grader					
613E (5,000 gal) Water Wagon		1	\$76.93	\$68.43	\$145.36
14G/H		1	\$145.42	\$90.20	\$235.62
Totals			\$222.35	\$158.63	\$380.98
Maintenance - Large Water Truck and Cat 16G Grader					
621E (8,000 gal) Water Wagon		1	\$133.36	\$68.43	\$201.79
16G/H		1	\$208.77	\$90.20	\$298.97
Totals			\$342.13	\$158.63	\$500.76
PROJECT SUPERVISION					
Foreman		1	\$0.00	\$132.28	\$132.28
Supervisor's Truck		1	\$27.41	\$0.00	\$27.41
Totals			\$27.41	\$132.28	\$159.69

**Closure Cost Estimate
Fleets (Crews)**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
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Cost Data: User Data
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

EQUIPMENT FLEETS					
ACTIVITY AND FLEET		Standard Crew Size	EQUIPMENT UNIT COST (Hourly)	TOTAL LABOR UNIT COST (Hourly)	TOTAL COST (Hourly)
MEANS CREW DEFINITIONS					
Crew composition from Means Heavy Construction 2005 Edition by permission of R.S.Means/Reed Construction Data . For use with misc. unit costs where Means is the source for productivity					
1 Clab - Seedling Planting/Block Wall Demolition					
General Laborer		1	\$0.00	\$68.07	\$68.07
Totals			\$0.00	\$68.07	\$68.07
2 Clab - Barbed Wire/Wood Fence Removal, Drainpipe Installation, Pumping, Evaporation					
General Laborer		2	\$0.00	\$136.14	\$136.14
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$32.19	\$136.14	\$168.33
2 Clab + Excavator - Pond Liner Cut and Fold					
General Laborer		2	\$0.00	\$136.14	\$136.14
325C		1	\$92.82	\$90.20	\$183.02
Totals			\$92.82	\$226.34	\$319.16
2 Clab + Welder - Bat Gates					
General Laborer		2	\$0.00	\$136.14	\$136.14
Welding Equipment		1	\$27.83	\$64.67	\$92.50
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$60.02	\$200.81	\$260.83
3 Clab - Foam Adit Plugs					
General Laborer		2	\$0.00	\$136.14	\$136.14
420D 4WD Backhoe		1	\$38.85	\$89.72	\$128.57
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$71.04	\$225.86	\$296.90
3 Clab + Welder - Culvert Bat Gate					
General Laborer		2	\$0.00	\$136.14	\$136.14
Welding Equipment		1	\$27.83	\$64.67	\$92.50
420D 4WD Backhoe		1	\$38.85	\$89.72	\$128.57
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$98.87	\$290.53	\$389.40
3 Clab D - 3 Laborers + Foreman - Decontamination					
General Laborer		3	\$0.00	\$204.21	\$204.21
Foreman		1	\$0.00	\$132.28	\$132.28
Supervisor's Truck		1	\$27.41	\$0.00	\$27.41
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$59.60	\$336.49	\$396.09
3 SKWK - Liner Installation					
Skilled Laborer		3	\$0.00	\$204.96	\$204.96
HDEP Welder (pipe or liner)		1	\$63.71	\$0.00	\$63.71
420D 4WD Backhoe		1	\$38.85	\$89.72	\$128.57
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
Totals			\$102.56	\$294.68	\$397.24

**Closure Cost Estimate
Fleets (Crews)**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
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Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

EQUIPMENT FLEETS					
ACTIVITY AND FLEET		Standard Crew Size	EQUIPMENT UNIT COST (Hourly)	TOTAL LABOR UNIT COST (Hourly)	TOTAL COST (Hourly)
B-3 - Small Building Demolition					
LABOR					
General Laborer		2	\$0.00	\$136.14	\$136.14
Foreman		1	\$0.00	\$132.28	\$132.28
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
EQUIPMENT					
928G		1	\$62.97	\$89.72	\$152.69
Dump Truck (10-12 yd3)		2	\$195.78	\$136.86	\$332.64
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
Totals			\$258.75	\$495.00	\$753.75
B-6 - Chain Link Fence/Culvert Removal					
General Laborer		2	\$0.00	\$136.14	\$136.14
928G		1	\$62.97	\$89.72	\$152.69
Totals			\$62.97	\$225.86	\$288.83
B-8 - Large Building Demolition					
LABOR					
General Laborer		2	\$0.00	\$136.14	\$136.14
Foreman		1	\$0.00	\$132.28	\$132.28
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
EQUIPMENT					
928G		1	\$62.97	\$89.72	\$152.69
20 Ton Crane		1	\$92.23	\$89.72	\$181.95
Dump Truck (10-12 yd3)		2	\$195.78	\$136.86	\$332.64
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
			\$0.00		\$0.00
Totals			\$350.98	\$584.72	\$935.70
B-9 - Concrete Wall Demolition					
General Laborer		4	\$0.00	\$272.28	\$272.28
Foreman		1	\$0.00	\$132.28	\$132.28
Air Compressor & tools			\$40.36	\$85.82	\$126.18
Totals			\$40.36	\$490.38	\$530.74

**Closure Cost Estimate
Fleets (Crews)**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

EQUIPMENT FLEETS					
ACTIVITY AND FLEET		Standard Crew Size	EQUIPMENT UNIT COST (Hourly)	TOTAL LABOR UNIT COST (Hourly)	TOTAL COST (Hourly)
B-10Y - General Compaction					
General Laborer		1	\$0.00	\$68.07	\$68.07
CS533E Vibratory Roller		1	\$67.47	\$89.46	\$156.93
Totals			\$67.47	\$157.53	\$225.00
B-11L - Fine Grading for Evaporation Pond Liner Base					
General Laborer		1	\$0.00	\$68.07	\$68.07
14G/H		1	\$145.42	\$90.20	\$235.62
Totals			\$145.42	\$158.27	\$303.69
B-11M - Backhoe Work					
420D 4WD Backhoe		1	\$38.85	\$89.72	\$128.57
Totals			\$38.85	\$89.72	\$128.57
B-12G - Rip-Rap Machine Placed (Modified)					
966G		1	\$118.33	\$89.72	\$208.05
325C		1	\$92.82	\$90.20	\$183.02
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$243.34	\$179.92	\$423.26
B-13 - Grouted Rip-Rap & Gabion Baskets					
General Laborer		4	\$0.00	\$272.28	\$272.28
Foreman		1	\$0.00	\$132.28	\$132.28
20 Ton Crane		1	\$92.23	\$89.72	\$181.95
Totals			\$92.23	\$494.28	\$586.51
B-14 PVC Drain Pipe Installation					
Foreman		1	\$0.00	\$132.28	\$132.28
General Laborer		4	\$0.00	\$272.28	\$272.28
420D 4WD Backhoe		1	\$38.85	\$89.72	\$128.57
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$71.04	\$494.28	\$565.32
B-20 - Remove Pipelines					
Foreman		1	\$0.00	\$132.28	\$132.28
Skilled Laborer		1	\$0.00	\$68.32	\$68.32
General Laborer		1	\$0.00	\$68.07	\$68.07
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$32.19	\$268.67	\$300.86
B-22A - HDEP Installation - Pipe or Liner					
Skilled Laborer		1	\$0.00	\$68.32	\$68.32
General Laborer		2	\$0.00	\$136.14	\$136.14
D7R		1	\$118.35	\$90.77	\$209.12
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
420D 4WD Backhoe		1	\$38.85	\$89.72	\$128.57
Generator 5KW		1	\$16.96	\$0.00	\$16.96
HDEP Welder (pipe or liner)		1	\$63.71	\$0.00	\$63.71
Totals			\$270.06	\$384.95	\$655.01
B-80A - Install Barbed Wire Fence					
General Laborer		3	\$0.00	\$204.21	\$204.21
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$32.19	\$204.21	\$236.40

**Closure Cost Estimate
Fleets (Crews)**

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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

EQUIPMENT FLEETS					
ACTIVITY AND FLEET		Standard Crew Size	EQUIPMENT UNIT COST (Hourly)	TOTAL LABOR UNIT COST (Hourly)	TOTAL COST (Hourly)
B-80C - Install Chain Link Fence (Flatbed truck has small crane)					
General Laborer		3	\$0.00	\$204.21	\$204.21
Light Truck - 1.5 Ton		1	\$32.19	\$0.00	\$32.19
Totals			\$32.19	\$204.21	\$236.40
C-14B - Elevated Concrete Slabs (Reinforced Concrete Shaft Covers)					
Foreman		1	\$0.00	\$132.28	\$132.28
Supervisor's Truck		1	\$27.41	\$0.00	\$27.41
Carpenter		16	\$0.00	\$1,187.36	\$1,187.36
General Laborer		2	\$0.00	\$136.14	\$136.14
Rodmen (reinforcing concrete)		4	\$0.00	\$276.12	\$276.12
Cement finisher		2	\$0.00	\$137.32	\$137.32
Gas Engine Vibrator		1	\$7.89	\$65.52	\$73.41
Concrete Pump		1	\$97.20	\$0.00	\$97.20
Totals			\$132.50	\$1,934.74	\$2,067.24
C-14D - Concrete Walls Formed in Place (Reinforced Concrete Adit Bulkheads)					
Foreman		1	\$0.00	\$132.28	\$132.28
Supervisor's Truck		1	\$27.41	\$0.00	\$27.41
Carpenter		18	\$0.00	\$1,335.78	\$1,335.78
General Laborer		2	\$0.00	\$136.14	\$136.14
Rodmen (reinforcing concrete)		2	\$0.00	\$138.06	\$138.06
Cement finisher		1	\$0.00	\$68.66	\$68.66
Gas Engine Vibrator		1	\$7.89	\$65.52	\$73.41
Concrete Pump		1	\$97.20	\$0.00	\$97.20
Totals			\$132.50	\$1,876.44	\$2,008.94

Closure Cost Estimate Productivity

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 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Bulldozers

Dozer Specifications						
Description	D11R	D10R	D9R	D8R	D7R	D6R
Blade Width (SU) (ft)	18.33	15.92	14.17	12.92	12.08	10.67
Shank Gauge (3 shanks) (ft)	9.83	8.67	7.67	7.08	6.5	6.5
Pocket Spacing (ft)	4.75	4.33	3.87	3.58	3.25	3.25
Ripping Width (Ripper + 1 Pocket) (ft)	14.58	13	11.54	10.66	9.75	9.75
Ripping Speed (mph)	1	1	1	1	1	1
Ripping Maneuver (turn) Time (min)	0.25	0.25	0.25	0.25	0.25	0.25
Altitude Deration Factor	1	1	1	1	1	1
Ripping Hourly Production (excluding maneuvering time) (ft)	5,280	5,280	5,280	5,280	5,280	5,280

Source: Caterpillar Performance Handbook Edition 35

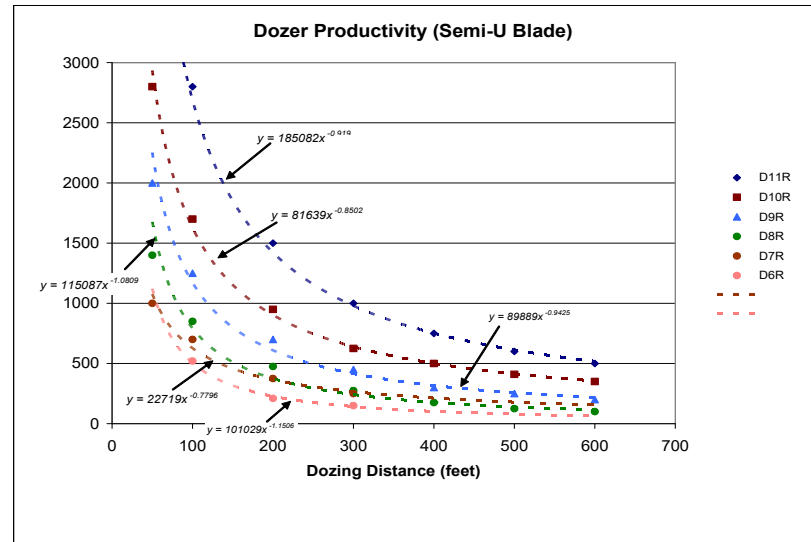
Dozer Productivity vs. Grading Distance						
Average Dozing Distance (feet)	Production (LCY/hr)					
	D11R	D10R	D9R	D8R	D7R	D6R
50	4,800	2,800	2,000	1,400	1,000	
100	2,800	1,700	1,250	850	700	520
200	1,500	950	700	475	375	210
300	1,000	625	450	275	250	150
400	750	500	300	175		
500	600	410	250	125		
600	500	350	200	100		

Source: Caterpillar Performance Handbook Edition 35

$$\text{dozer productivity} = k \times \text{Dozing Distance}^p$$

(see graph)

k =	185082	81639	89889	115087	22719	101029
p =	-0.919	-0.8502	-0.9425	-1.0809	-0.7796	-1.1506



Closure Cost Estimate Productivity

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
Date of Submittal: May 3, 2022
File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
Model Version: Version 1.4.1
Cost Data: User Data
Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Bulldozers (cont.)

% Grade vs. Dozing Factor	
% Grade	Dozing Factor
-30	1.6
-20	1.4
-10	1.2
0	1.0
10	0.8
20	0.55
30	0.3

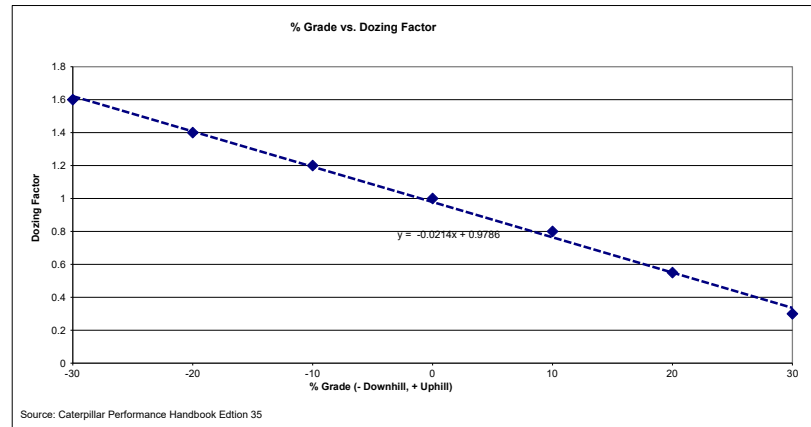
Source: Caterpillar Performance Handbook Edition 35
% Grade Dozing Factor = $-0.0214x + 0.9786$
(see graph)

Job Condition Correction Factors - Bulldozers	
OPERATOR	
Average	0.75
MATERIAL ⁽¹⁾	
Loose stockpile	1.2
Normal	1
Hard to cut; frozen — with tilt cylinder	0.8
Hard to drift; "dead" (dry, non-cohesive material) or very sticky material	0.8
Rock, ripped or blasted	0.6
SLOT DOZING OR SIDE BY SIDE ⁽¹⁾	1.2
VISIBILITY	
Good conditions	1
JOB EFFICIENCY	
50 min/hr	0.83

(1) Selected in facility worksheets.
Other factors included as standard factors.
Source: Caterpillar Performance Handbook Edition 35

Material Densities(1)		
Material	lb/cy	kg/m ³
Alluvium	2,900	1,720
Basalt	3,300	1,960
Clay - Dry	2,500	1,480
Granite - broken	2,800	1,660
Gravel	2,550	1,510
LS - broken	2,600	1,540
LS - crushed	2,600	1,540
Sandstone	2,550	1,510
Shale	2,100	1,250
Stone - crushed	2,700	1,600
Tailings - Coarse (dry, loose sand)	2,400	1,420
Tailings - Slimes (loose sand & clay)	2,700	1,600
Topsoil	1,600	950

(1) Source: Caterpillar Performance Handbook Edition 35



Note: uses Sand & Gravel - Dry from Caterpillar Handbook

**Closure Cost Estimate
Productivity**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
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 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Scrapers

Scraper Specifications		
Description	631G	637G
Empty Weight	100,600	112,760
Payload Capacity (cy)		
Struck	24	24
Heaped	34	34
Average	29	29
Loaded by	One D10R	Self*
Load Time (min)	1	1
Maneuver and Spread (min)	1	1
Job Efficiency	1	1
Rolling Resistance**	3	3
Altitude Deration Factor	1	1
* Requires pair		
**A firm, smooth, rolling roadway with dirt or light surfacing, flexing slightly under load or undulating, maintained fairly regularly, watered		
Source: Caterpillar Performance Handbook Edition 35		

Weight of Materials			Downhill Scraper Speed - Grade Retarding vs. Effective Grade (Grade - Rolling Resistance)											
			631G						637G PP					
Material	lb/cy	Scraper Load lb	Loaded Weight (lbs)	22	16	10	5	1	Loaded Weight (lbs)	25	15	10	5	1
Alluvium	2,900	84,100	184,700	7.5	10	13	33	33	196,860	7	10	18.5	34	34
Basalt	3,300	95,700	196,300	7.5	10	13	24.5	33	208,460	7	10	18.5	25	34
Clay - Dry	2,500	72,500	173,100	7.5	10	13	33	33	185,260	7	10	18.5	34	34
Granite - broken	2,800	81,200	181,800	7.5	10	13	33	33	193,960	7	10	18.5	34	34
Gravel	2,550	73,950	174,550	7.5	10	13	33	33	186,710	7	10	18.5	34	34
LS - broken	2,600	75,400	176,000	7.5	10	13	33	33	188,160	7	10	18.5	34	34
LS - crushed	2,600	75,400	176,000	7.5	10	13	33	33	188,160	7	10	18.5	34	34
Sandstone	2,550	73,950	174,550	7.5	10	13	33	33	186,710	7	10	18.5	34	34
Shale	2,100	60,900	161,500	7.5	10	18	33	33	173,660	10	13.5	18.5	34	34
Stone - crushed	2,700	78,300	178,900	7.5	10	13	33	33	191,060	7	10	18.5	34	34
Tailings - Coarse (dry, loose sand)	2,400	69,600	170,200	7.5	10	13	33	33	182,360	7	10	18.5	34	34
Tailings - Slimes (loose sand & clay)	2,700	78,300	178,900	7.5	10	13	33	33	191,060	7	10	18.5	34	34
Topsoil	1,600	46,400	147,000	7.5	10	18	33	33	159,160	10	13.5	18.5	34	34
			Empty	10	18	24.5	33	33	Empty	10	13.5	18.5	34	34
Source: Caterpillar Performance Handbook Edition 34														

Closure Cost Estimate Productivity

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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

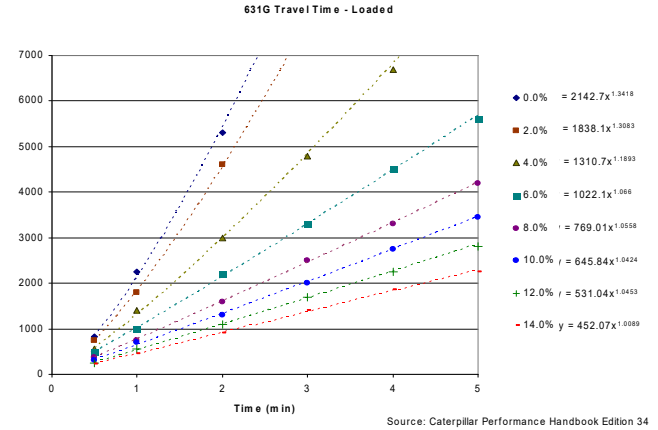
Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Scrapers (cont.)

631G Scraper Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	825	2,250	5,300			2142.7	1.3418	
2	750	1,800	4,600			1838.1	1.3083	
4	550	1,400	3,000	4,800	6,700	1310.7	1.1893	
6	490	1,000	2,200	3,300	4,500	1022.1	1.066	
8	375	750	1,600	2,500	3,300	769.01	1.0558	
10	300	700	1,300	2,000	2,750	645.84	1.0424	
12	250	550	1,100	1,700	2,250	531.04	1.0453	
14	225	450	900	1,400	1,850	452.07	1.0089	

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

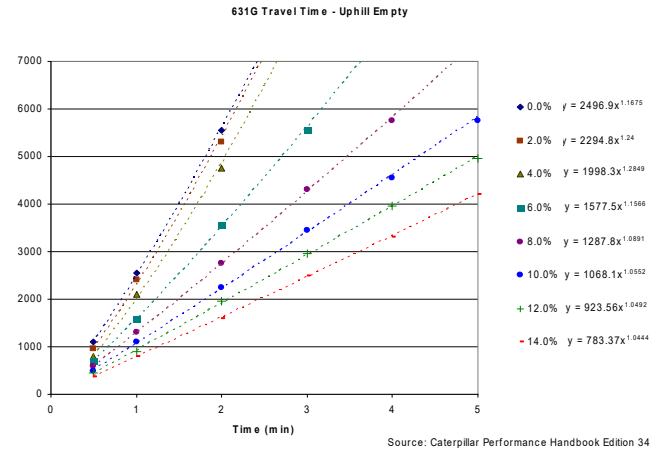
Source: Caterpillar Performance Handbook Edition 35



631G Scraper Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	1,100	2,550	5,550			2496.9	1.1675	
2	950	2,400	5,300			2294.8	1.24	
4	800	2,100	4,750			1998.3	1.2849	
6	700	1,600	3,550	5,550		1557.5	1.1566	
8	600	1,300	2,750	4,300	5,750	1287.8	1.0891	
10	500	1,100	2,250	3,450	4,550	1068.1	1.0552	
12	450	900	1,950	2,950	3,950	923.56	1.0492	
14	375	800	1,600	2,500	3,300	783.37	1.0444	

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

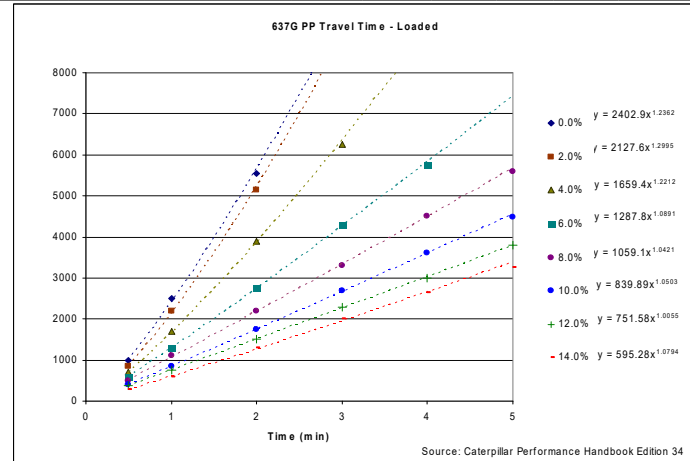
Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Scrapers (cont.)

637G Push-Pull Scraper Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	1,000	2,500	5,550			2402.9	1.2362	
2	850	2,200	5,150			2127.6	1.2995	
4	700	1,700	3,900	6,250		1659.4	1.2212	
6	600	1,300	2,750	4,300	5,750	1287.8	1.0891	
8	500	1,100	2,200	3,300	4,500	1059.1	1.0421	
10	400	850	1,750	2,700	3,600	839.89	1.0503	
12	375	750	1,500	2,300	3,000	751.58	1.0055	
14	275	600	1,300	2,000	2,650	595.28	1.0794	

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

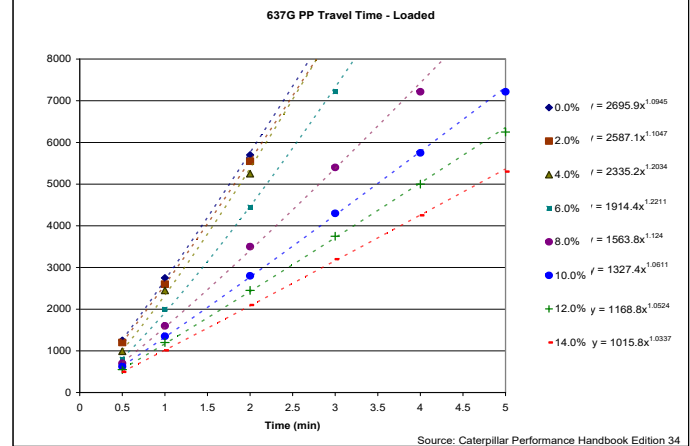
Source: Caterpillar Performance Handbook Edition 35



637G Push-Pull Scraper Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	1,250	2,750	5,700			2695.9	1.0945	
2	1,200	2,600	5,550			2587.1	1.1047	
4	990	2,450	5,250			2335.2	1.0234	
6	800	2,000	4,450	7,216		1914.4	1.2211	
8	700	1,600	3,500	5,400	7,216	1563.8	1.124	
10	625	1,350	2,800	4,300	5,750	1327.4	1.0611	
12	550	1,200	2,450	3,750	5,000	1168.8	1.0524	
14	495	1,010	2,100	3,200	4,250	1015.8	1.0337	

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate
Productivity

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Cost Data: User Data
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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Haul Trucks

Haul Truck Specifications						
Description	769D	773E	777D	785C	793C	797B
Chassis Weight (lb)	53,506	70,330	113,160	170,000	259,500	473,600
Body Weight (lb)	17,350	20,300	34,785	36,788	70,785	104,200
Standard Liner Weight (lb)	7,000	8,600	12,040	16,846	24,418	8,800
Total Truck Weight (lb)	77,856	99,230	159,985	223,634	354,703	586,600
Payload Capacity (cy)						
Struck	21.6	34.8	55	78.5	126	228
Heaped	31.7	46	78.6	102	169	290
Average	26.65	40.4	66.8	90.25	147.5	259
Maneuver to Load Time (min)	0.7	0.7	0.7	0.7	0.7	0.7
Maneuver and Dump Time (min)	1.1	1.1	1.1	1.1	1.1	1.1
Job Efficiency	0.83	0.83	0.83	0.83	0.83	0.83
Rolling Resistance**	2.5	2.5	2.5	2.5	2.5	2.5
Altitude Deration Factor	1	1	1	1	1	1
**A firm, smooth, rolling roadway with dirt or light surfacing, flexing slightly under load or undulating, maintained fairly regularly, watered						
Source: Caterpillar Performance Handbook Edition 35						

Weight of Materials					Downhill Haul Truck Speed - Grade Retarding vs. Effective Grade (Grade - Rolling Resistance)														
					769D					773E					777D				
Material	lb/cy	Truck (769D) Load lb	Truck (773E) Load lb	Truck (777D) Load lb	Loaded Weight (lbs)	20	15	10	5	Loaded Weight (lbs)	20	15	10	5	Loaded Weight (lbs)	20	15	10	5
Alluvium	2,900	77,285	117,160	193,720	155,141	11	11	15	26	216,390	7	7	13	23	353,705	7	9	12	29
Basalt	3,300	87,945	133,320	220,440	165,801	11	11	11	20	232,550	7	7	13	23	380,425	7	7	12	21
Clay - Dry	2,500	66,625	101,000	167,000	144,481	11	11	15	26	200,230	7	9	13	23	326,985	7	9	16	29
Granite - broken	2,800	74,620	113,120	187,040	152,476	11	11	15	26	212,350	7	7	13	23	347,025	7	9	12	29
Gravel	2,550	67,958	103,020	170,340	145,814	11	11	15	26	202,250	7	9	13	23	330,325	7	9	16	29
LS - broken	2,600	69,290	105,040	173,680	147,146	11	11	15	26	204,270	7	9	13	23	333,665	7	9	12	29
LS - crushed	2,600	69,290	105,040	173,680	147,146	11	11	15	26	204,270	7	9	13	23	333,665	7	9	12	29
Sandstone	2,550	67,958	103,020	170,340	145,814	11	11	15	26	202,250	7	9	13	23	330,325	7	9	16	29
Shale	2,100	55,965	84,840	140,280	133,821	11	11	15	26	184,070	7	9	13	31	300,265	7	9	16	29
Stone - crushed	2,700	71,955	109,080	180,360	149,811	11	11	15	26	208,310	7	7	13	23	340,345	7	9	12	29
Tailings - Coarse (dry, loose sand)	2,400	63,960	96,960	160,320	141,816	11	11	15	26	196,190	7	9	13	23	320,305	7	9	16	29
Tailings - Slimes (loose sand & clay)	2,700	71,955	109,080	180,360	149,811	11	11	15	26	208,310	7	7	13	23	340,345	7	9	12	29
Topsoil	1,600	42,640	64,640	106,880	120,496	11	11	15	26	163,870	7	9	17	31	266,865	9	12	16	29
					Empty	15	15	26	36	Empty	13	17	23	42	Empty	16	16	29	39
Source: Caterpillar Performance Handbook Edition 35																			

Closure Cost Estimate Productivity

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Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Weight of Materials					Downhill Haul Truck Speed - Grade Retarding vs. Effective Grade (Grade - Rolling Resistance)														
					785C					793C					797B				
Material	lb/cy	Truck (785C) Load lb	Truck (793C) Load lb	Truck (797B) Load lb	Loaded Weight (lbs)	20	15	10	5	Loaded Weight (lbs)	20	15	10	5	Loaded Weight (lbs)	20	15	10	5
Alluvium	2,900	261,725	427,750	751,100	485,359	8	8	14	27	782,453	7	7	10	17	1,337,700	7	7	9	17
Basalt	3,300	297,825	486,750	854,700	521,459	8	8	14	27	841,453	7	7	10	17	1,441,300	7	7	9	17
Clay - Dry	2,500	225,625	368,750	647,500	449,259	8	11	14	36	723,453	7	7	10	25	1,234,100	7	7	9	23
Granite - broken	2,800	252,700	413,000	725,200	476,334	8	8	14	27	767,703	7	7	10	17	1,311,800	7	7	9	17
Gravel	2,550	230,138	376,125	660,450	453,772	8	8	14	36	730,828	7	7	10	25	1,247,050	7	7	9	23
LS - broken	2,600	234,650	383,500	673,400	458,284	8	8	14	27	738,203	7	7	10	25	1,260,000	7	7	9	23
LS - crushed	2,600	234,650	383,500	673,400	458,284	8	8	14	27	738,203	7	7	10	25	1,260,000	7	7	9	23
Sandstone	2,550	230,138	376,125	660,450	453,772	8	8	14	36	730,828	7	7	10	25	1,247,050	7	7	9	23
Shale	2,100	189,525	309,750	543,900	413,159	8	11	14	36	664,453	7	7	10	25	1,130,500	7	7	13	23
Stone - crushed	2,700	243,675	398,250	699,300	467,309	8	8	14	27	752,953	7	7	10	17	1,285,900	7	7	9	23
Tailings - Coarse (dry, loose sand)	2,400	216,600	354,000	621,600	440,234	8	11	14	36	708,703	7	7	10	25	1,208,200	7	7	9	23
Tailings - Slimes (loose sand & clay)	2,700	243,675	398,250	699,300	467,309	8	8	14	27	752,953	7	7	10	17	1,285,900	7	7	9	23
Topsoil	1,600	144,400	236,000	414,400	368,034	8	11	19	36	590,703	7	10	13	25	1,001,000	7	9	13	23
Empty						14	19	36	36	Empty	10	13	17	33	Empty	13	17	23	42

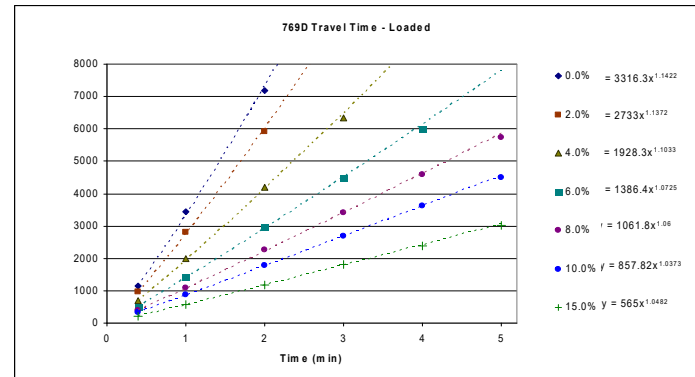
Source: Caterpillar Performance Handbook Edition 35

Productivity - Haul Trucks (cont.)

769D Haul Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.4	1	2	3	4			
0	1,148	3,428	7,183			3316.3	1.1422	
4	689	1,984	4,198	6,330		1928.3	1.1033	
6	508	1,427	2,952	4,510	6,002	1386.4	1.0725	
8	394	1,082	2,263	3,411	4,592	1061.8	1.06	
10	328	869	1,771	2,690	3,608	857.82	1.0373	
15	213	574	1,181	1,804	2,394	565	1.0482	

$$\text{Travel Time (min)} = \sqrt{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

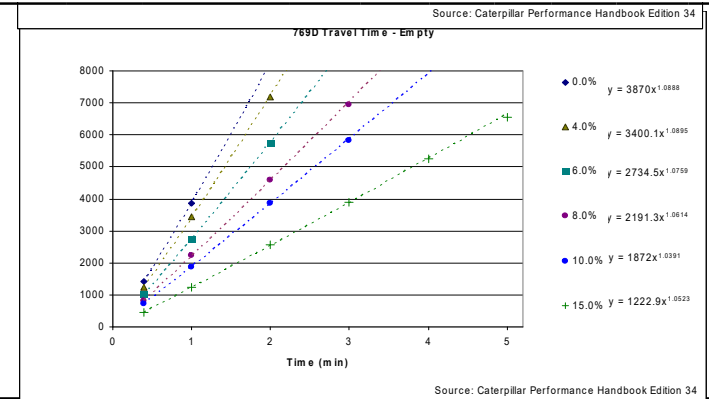
Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
 Date of Submittal: May 3, 2022
 File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

769D Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)						k	p
	0.4	1	2	3	4	5		
0	1,427	3,870					3870	1.0888
4	1,246	3,444	7,183				3400.1	1.0895
6	1,017	2,755	5,740				2734.5	1.0759
8	820	2,230	4,592	6,954			2191.3	1.0614
10	722	1,870	3,870	5,838			1872	1.0391
15	459	1,246	2,558	3,903	5,248	6,560	1222.9	1.0523

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35

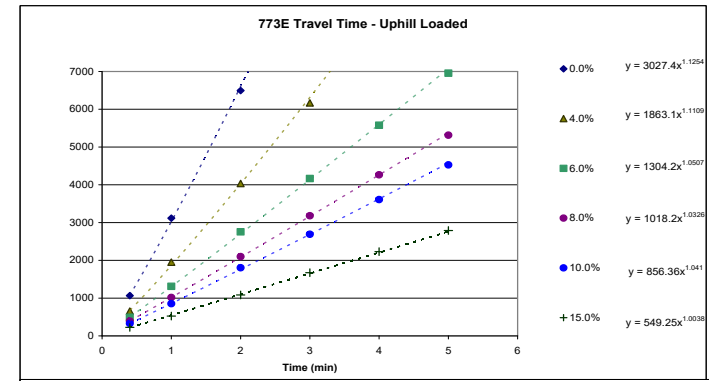


Productivity - Haul Trucks (cont.)

773E Haul Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)						k	p
	0.4	1	2	3	4	5		
0	1,066	3,117	6,496				3027.4	1.1254
4	656	1,952	4,035	6,168			1863.1	1.1109
6	492	1,312	2,756	4,167	5,577	6,955	1304.2	1.0507
8	394	1,017	2,100	3,182	4,265	5,315	1018.2	1.0326
10	328	853	1,804	2,690	3,609	4,528	856.36	1.041
15	226	525	1,083	1,673	2,231	2,789	549.25	1.0038

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

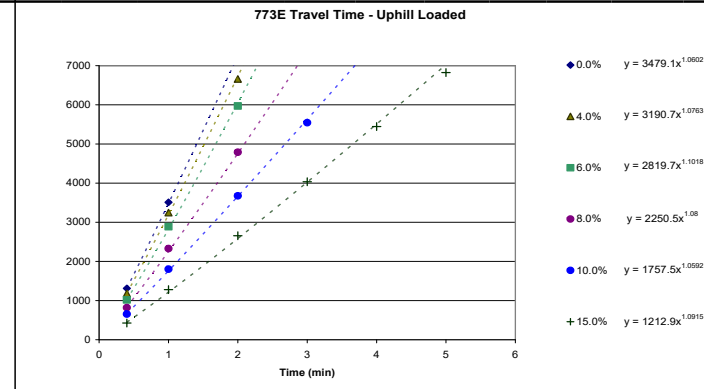
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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

773E Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.4	1	2	3	4	5		
0	1,312	3,510	7,218				3479.1	1.0602
4	1,181	3,248	6,660				3190.7	1.0763
6	1,017	2,887	5,971				2819.7	1.1018
8	820	2,329	4,790	7,218			2250.5	1.08
10	656	1,804	3,675	5,545			1757.5	1.0592
15	427	1,280	2,657	4,035	5,446	6,824	1212.9	1.0915

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35

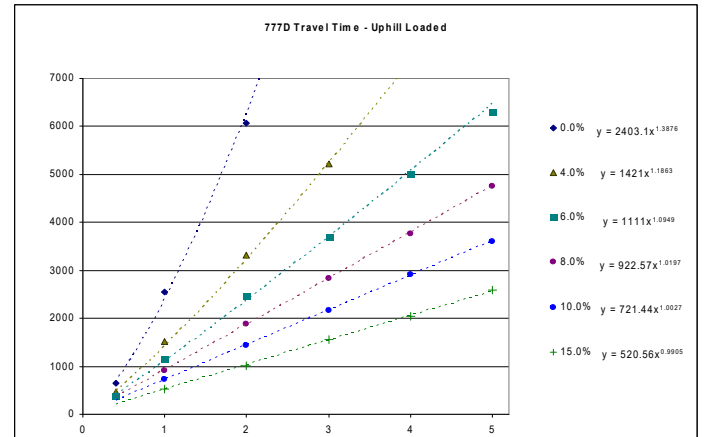


Productivity - Haul Trucks (cont.)

777D Haul Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.4	1	2	3	4	5		
0	656	2,558	6,068				2403.1	1.3876
4	459	1,509	3,313	5,215	7,085		1412	1.1863
6	394	1,148	2,460	3,706	5,018	6,298	1111	1.0949
8		918	1,886	2,837	3,772	4,756	922.57	1.0197
10		722	1,443	2,165	2,919	3,608	721.44	1.0027
15		525	1,017	1,558	2,034	2,591	520.56	0.9905

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

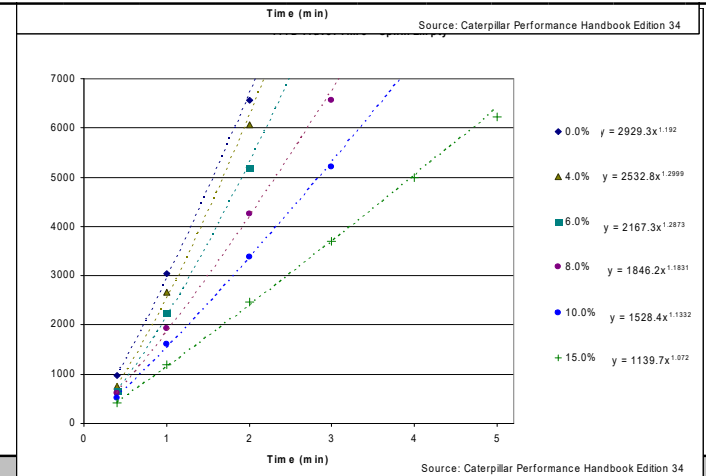
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Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

777D Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)						k	p
	0.4	1	2	3	4	5		
0	968	3,034	6,560				2929.3	1.192
4	754	2,657	6,068				2532.8	1.2999
6	656	2,247	5,182				2167.3	1.2873
8	607	1,935	4,248	6,560			1846.2	1.1831
10	525	1,607	3,378	5,215	7,282		1528.4	1.1332
15	410	1,197	2,460	3,706	4,986	6,232	1139.7	1.072

$$\text{Travel Time (min)} = \sqrt[p]{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35

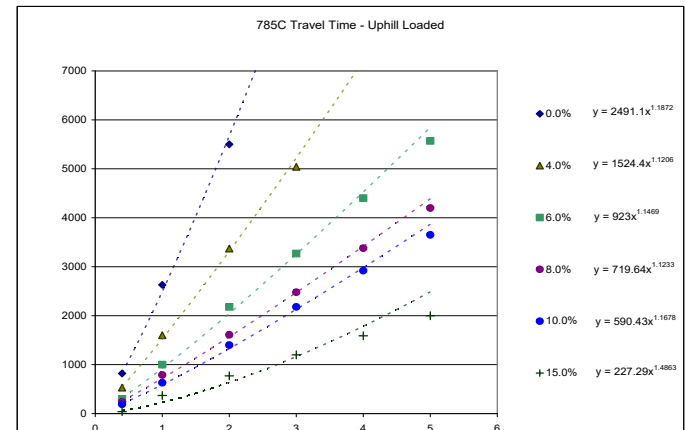


Productivity - Haul Trucks (cont.)

785C Haul Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)						k	p
	0.4	1	2	3	4	5		
0	820	2,630	5,500				2491.1	1.1872
4	530	1,600	3,370	5,040			1524.4	1.1206
6	300	1,000	2,180	3,270	4,400	5,570	923	1.1469
8	240	790	1,610	2,480	3,380	4,200	719.64	1.1233
10	190	630	1,400	2,180	2,920	3,650	590.43	1.1678
15	40	370	770	1,200	1,590	2,000	227.29	1.4863

$$\text{Travel Time (min)} = \sqrt[p]{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

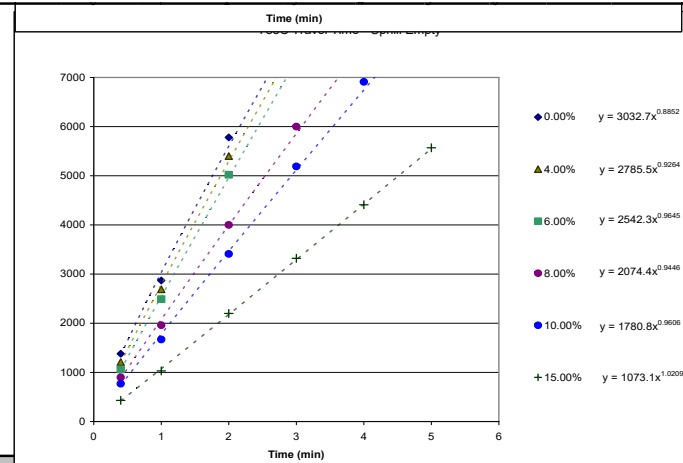
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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

785C Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)						k	p
	0.4	1	2	3	4	5		
0	1,380	2,870	5,780				3032.7	0.8852
4	1,210	2,690	5,400				2785.5	0.9264
6	1,060	2,490	5,020				2542.3	0.9645
8	900	1,960	4,000	6,000			2074.4	0.9446
10	770	1,670	3,410	5,190	6,910		1780.8	0.9606
15	430	1,030	2,200	3,320	4,410	5,570	1073.1	1.0209

$$\text{Travel Time (min)} = \sqrt[p]{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35

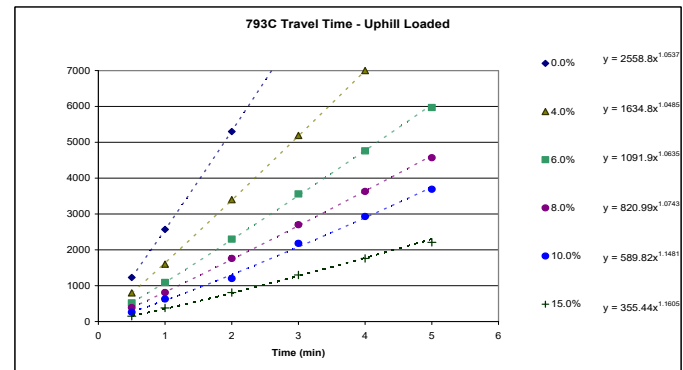


Productivity - Haul Trucks (cont.)

793C Haul Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)						k	p
	0.5	1	2	3	4	5		
0	1,230	2,570	5,300				2558.8	1.0537
4	800	1,600	3,400	5,190	7,000		1634.8	1.0485
6	520	1,090	2,300	3,560	4,760	5,970	1091.9	1.0635
8	390	810	1,760	2,700	3,630	4,570	820.99	1.0743
10	260	630	1,200	2,180	2,930	3,690	589.82	1.1481
15	150	380	810	1,300	1,760	2,210	355.44	1.1805

$$\text{Travel Time (min)} = \sqrt[p]{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

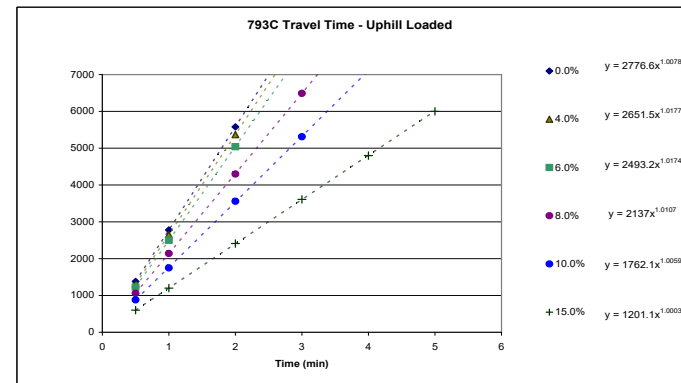
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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

793C Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)						k	p
	0.5	1	2	3	4	5		
0	1,380	2,780	5,580				2776.6	1.0078
4	1,310	2,650	5,370				2651.5	1.0177
6	1,230	2,500	5,040				2493.2	1.0174
8	1,060	2,140	4,300	6,490			2137	1.0107
10	880	1,750	3,560	5,310			1762.1	1.0059
15	600	1,200	2,410	3,610	4,800	6,000	1201.1	1.0003

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35

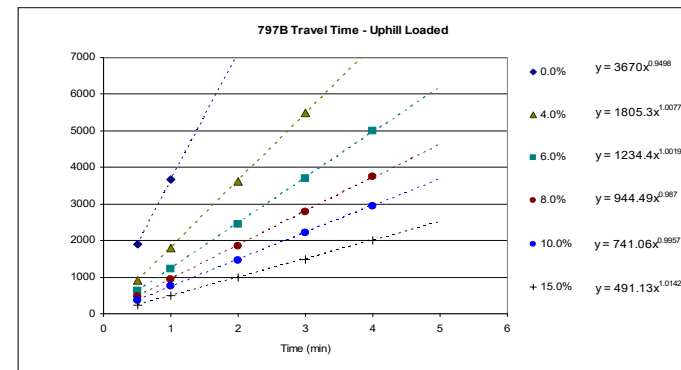


Productivity - Haul Trucks (cont.)

797B Haul Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)						k	p
	0.5	1	2	3	4	5		
0	1,900	3,670					3670	0.9498
4	900	1,800	3,620	5,480			1805.3	1.0077
6	620	1,230	2,450	3,700	5,000		1234.4	1.0019
8	480	940	1,850	2,790	3,750		944.49	0.987
10	370	750	1,460	2,220	2,950		741.06	0.9957
15	240	500	1,000	1,480	2,000		491.13	1.0142

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

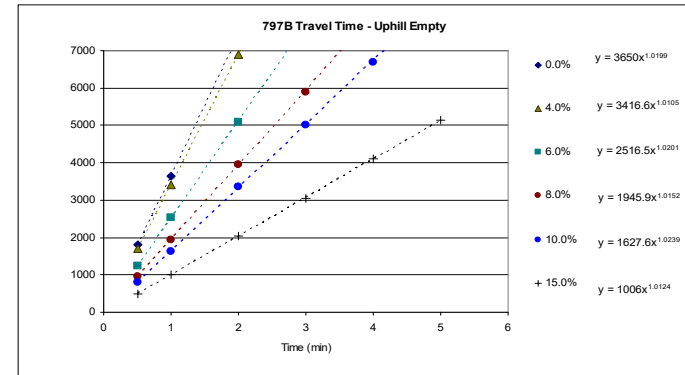
Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

797B Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)						k	p
	0.5	1	2	3	4	5		
0	1,800	3,650					3650	1.0199
4	1,700	3,400	6,900				3416.6	1.0105
6	1,240	2,520	5,100				2516.5	1.0201
8	960	1,950	3,960	5,900			1945.9	1.0152
10	800	1,620	3,350	5,000	6,700		1627.6	1.0239
15	500	1,000	2,040	3,050	4,100	5,130	1006	1.0124

$$\text{Travel Time (min)} = \sqrt[3]{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35



Productivity - Articulated Trucks

Articulated Truck Specifications				
Description	725	730	735	740
Chassis Weight (lb)				
Body Weight (lb)				
Standard Liner Weight (lb)				
Operating Weight (Empty) (lb)	50,120	51,220	65,830	72,070
Payload Capacity (cy)				
Struck	14.5	17.1	19.3	23.3
Heaped	18.8	22.1	31.8	30.2
Average	16.65	19.6	25.55	26.75
Maneuver to Load Time (min)	0.7	0.7	0.7	0.7
Maneuver and Dump Time (min)	1.1	1.1	1.1	1.1
Job Efficiency	0.83	0.83	0.83	0.83
Rolling Resistance**	2.5	2.5	2.5	2.5
Altitude Deration Factor	1	1	1	1

**A firm, smooth, rolling roadway with dirt or light surfacing, flexing slightly under load or undulating, maintained fairly regularly, watered

Source: Caterpillar Performance Handbook Edition 35

**Closure Cost Estimate
Productivity**

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Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Weight of Materials				Downhill Haul Truck Speed - Grade Retarding vs. Effective Grade (Grade - Rolling Resistance)									
				725					730				
Material	lb/cy	Truck (725) Load lb	Truck (730) Load lb	Loaded Weight (lbs)	20	15	10	5	Loaded Weight (lbs)	20	15	10	5
Alluvium	2,900	48,285	56,840	98,405	9	9	13	30	108,060	5	8	13	29
Basalt	3,300	54,945	64,680	105,065	5	9	13	22	115,900	5	8	13	29
Clay - Dry	2,500	41,625	49,000	91,745	9	13	13	30	100,220	8	8	13	29
Granite - broken	2,800	46,620	54,880	96,740	9	13	13	30	106,100	5	8	13	29
Gravel	2,550	42,458	49,980	92,578	9	13	13	30	101,200	8	8	13	29
LS - broken	2,600	43,290	50,960	93,410	9	13	13	30	102,180	8	8	13	29
LS - crushed	2,600	43,290	50,960	93,410	9	13	13	30	102,180	8	8	13	29
Sandstone	2,550	42,458	49,980	92,578	9	13	13	30	101,200	8	8	13	29
Shale	2,100	34,965	41,160	85,085	9	13	22	30	92,380	8	13	13	29
Stone - crushed	2,700	44,955	52,920	95,075	9	13	13	30	104,140	8	8	13	29
Tailings - Coarse (dry, loose sand)	2,400	39,960	47,040	90,080	9	13	13	30	98,260	8	8	13	29
Tailings - Slimes (loose sand & clay)	2,700	44,955	52,920	95,075	9	13	13	30	104,140	8	8	13	29
Topsoil	1,600	26,640	31,360	76,760	9	13	22	30	82,580	8	13	22	35
				Empty	13	13	22	30	Empty	13	13	22	35

Source: Caterpillar Performance Handbook Edition 35

Weight of Materials				Downhill Haul Truck Speed - Grade Retarding vs. Effective Grade (Grade - Rolling Resistance)									
				735					740				
Material	lb/cy	Truck (735) Load lb	Truck (740) Load lb	Loaded Weight (lbs)	20	15	10	5	Loaded Weight (lbs)	20	15	10	5
Alluvium	2,900	74,095	77,575	139,925	7	9	13	27	149,645	7	9	17	23
Basalt	3,300	84,315	88,275	150,145	7	9	13	27	160,345	7	9	13	23
Clay - Dry	2,500	63,875	66,875	129,705	7	9	13	27	138,945	9	13	17	31
Granite - broken	2,800	71,540	74,900	137,370	7	9	13	27	146,970	7	9	17	23
Gravel	2,550	65,153	68,213	130,983	7	9	13	27	140,283	7	9	17	31
LS - broken	2,600	66,430	69,550	132,260	7	9	13	27	141,620	7	9	17	31
LS - crushed	2,600	66,430	69,550	132,260	7	9	13	27	141,620	7	9	17	31
Sandstone	2,550	65,153	68,213	130,983	7	9	13	27	140,283	7	9	17	31
Shale	2,100	53,655	56,175	119,485	9	9	18	27	128,245	7	13	17	31
Stone - crushed	2,700	68,985	72,225	134,815	7	9	13	27	144,295	7	9	17	23
Tailings - Coarse (dry, loose sand)	2,400	61,320	64,200	127,150	7	9	13	27	136,270	9	13	17	31
Tailings - Slimes (loose sand & clay)	2,700	68,985	72,225	134,815	7	9	13	27	144,295	7	9	17	23
Topsoil	1,600	40,880	42,800	106,710	9	13	18	36	114,870	9	13	17	31
				Empty	13	18	27	42	Empty	17	17	23	31

Source: Caterpillar Performance Handbook Edition 35

Closure Cost Estimate Productivity

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Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Articulated Trucks (cont.)

725 Articulated Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	600	2,190	5,200			2097.3	1.3455	
4	420	1,400	3,200	5,000	6,820	1329.1	1.2109	
6	400	1,080	2,390	3,630	4,950	1091.2	1.0904	
8	380	880	1,850	2,850	3,850	928.59	1.0158	
10	300	729	1,450	2,250	3,020	800	1.0076	
15	200	500	1,000	1,570	2,100	504.55	1.0225	

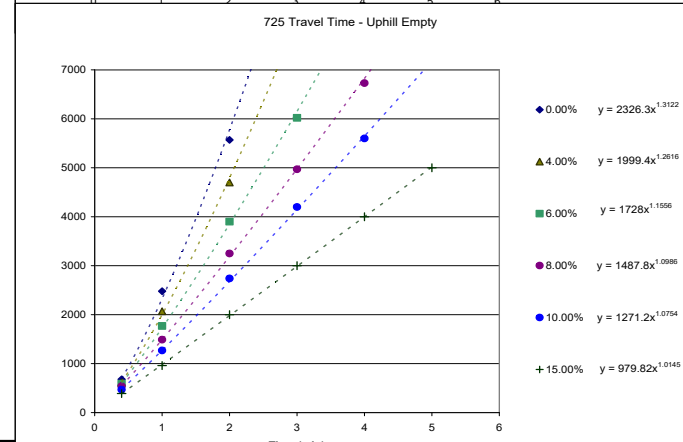
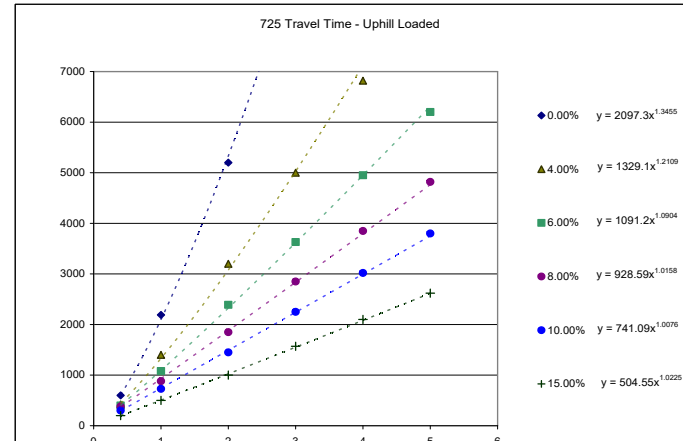
Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35

725 Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	680	2,480	5,570			2326.3	1.3122	
4	620	2,070	4,700			1999.4	1.2616	
6	590	1,770	3,900	6,020		1728	1.1556	
8	540	1,490	3,250	4,970	6,730	1487.8	1.0986	
10	470	1,270	2,740	4,200	5,600	1271.2	1.0754	
15	390	960	2,000	3,000	4,000	979.82	1.0145	

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

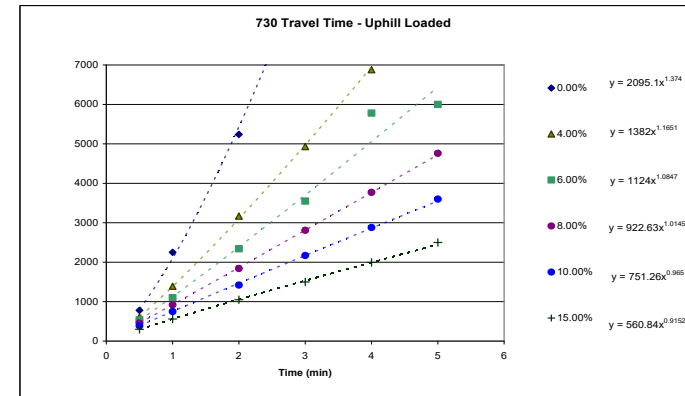
Productivity - Articulated Trucks (cont.)

Time (min)

730 Articulated Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	780	2,250	5,240			2095	1.374	
4	610	1,390	3,170	4,930	6,880	1382	1.1651	
6	540	1,100	2,340	3,550	5,780	112	1.0847	
8	460	920	1,840	2,810	3,770	922.63	1.0145	
10	390	750	1,420	2,170	2,880	751.26	0.965	
15	300	560	1,050	1,500	1,995	560.84	0.9152	

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

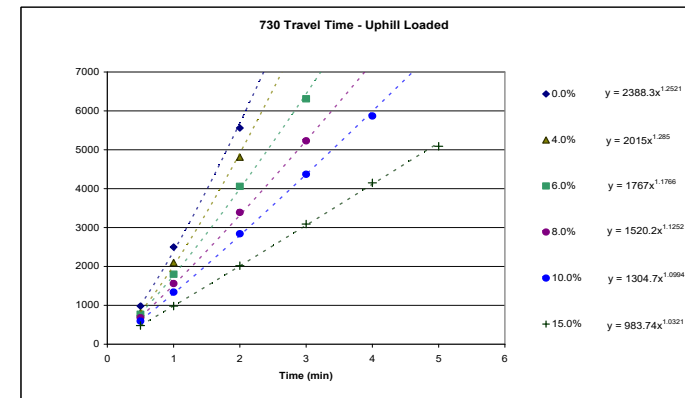
Source: Caterpillar Performance Handbook Edition 35



730 Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	980	2,500	5,560			2388	1.25621	
4	810	2,100	4,810			2015	1.285	
6	770	1,800	4,060	6,310		1767	1.1766	
8	680	1,560	3,390	5,230	7,070	1520.2	1.1252	
10	595	1,340	2,840	4,370	5,870	1304.7	1.0994	
15	480	980	2,020	3,090	4,150	983.74	1.0321	

Travel Time (min) = $\sqrt[p]{\frac{\text{distance}}{k}}$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Articulated Trucks (cont.)

735 Articulated Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	700	2,200	5,020			2166	1.2254	
4	550	1,350	2,950	4,520	6,100	1410.5	1.0528	
6	450	1,020	2,200	3,400	4,570	1095.6	1.0223	
8	390	810	1,650	2,530	3,370	879.73	0.9546	
10	340	700	1,400	2,100	2,800	754.84	0.9332	
15	230	500	970	1,400	1,900	519.31	0.9268	

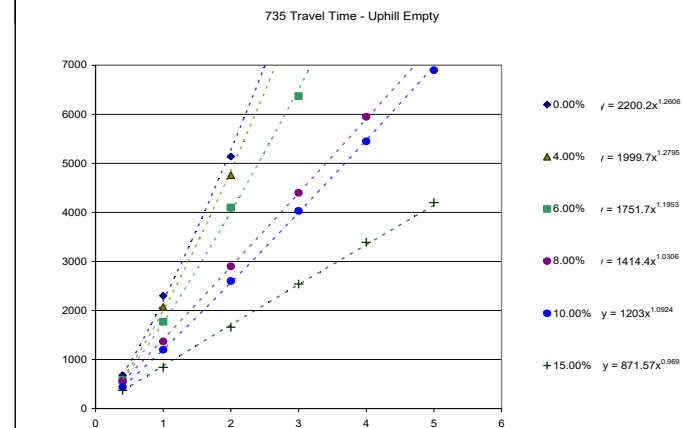
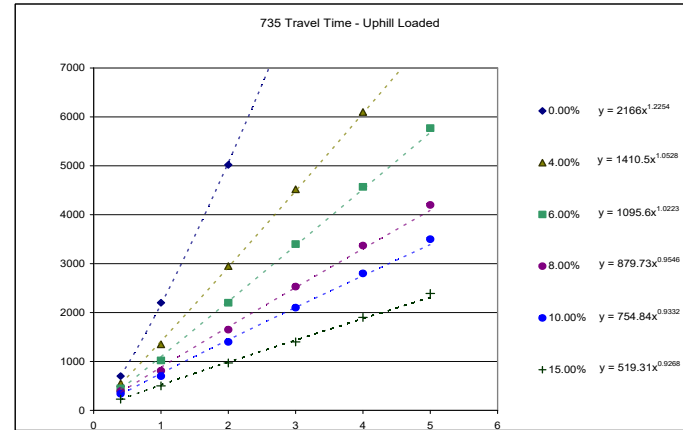
$$\text{Travel Time (min)} = \sqrt[p]{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35

735 Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	680	2,300	5,140			2200.2	1.2606	
4	610	2,070	4,760			1999.7	1.2795	
6	580	1,770	4,100	6,370		1751.7	1.1953	
8	560	1,370	2,900	4,400	5,950	1414.4	1.0306	
10	440	1,200	2,600	4,030	5,450	1203	1.0924	
15	370	840	1,660	2,540	3,390	871.57	0.969	

$$\text{Travel Time (min)} = \sqrt[p]{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate Productivity

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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Articulated Trucks (cont.)

Time (min)

740 Articulated Truck Travel Time - Uphill Loaded								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	600	2,340	5,500			2190.6	1.3823	
4	500	1,390	3,190	4,960	6,780	1415	1.1389	
6	420	1,020	2,200	3,400	4,580	5,700	1066.4	1.0438
8	350	800	1,650	2,560	3,400	4,300	842.87	1.0012
10	290	640	1,350	2,040	2,750	3,410	686.02	0.9889
15	200	450	940	1,400	1,830	2,340	474.86	0.9789

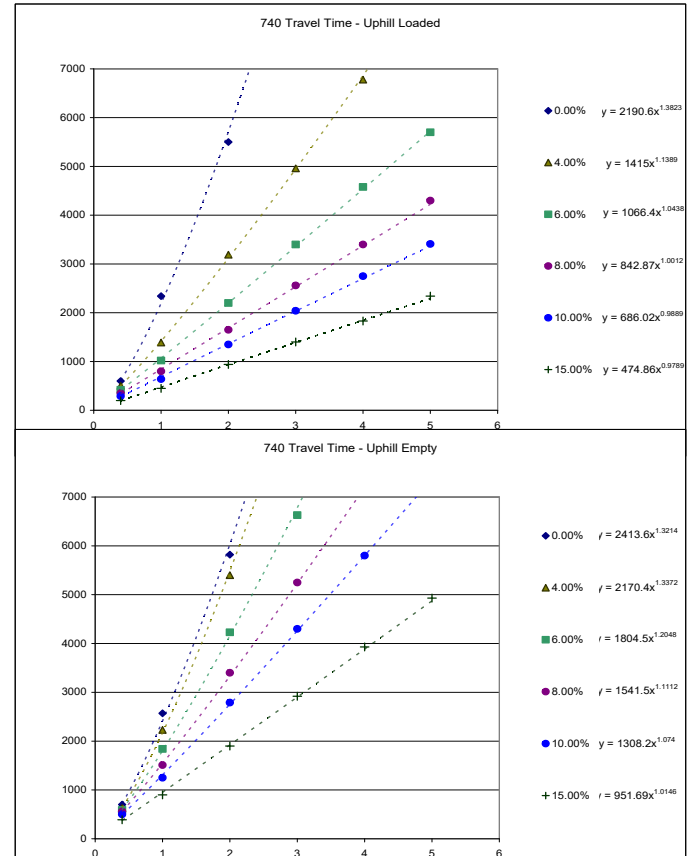
$$\text{Travel Time (min)} = \sqrt[p]{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35

740 Haul Truck Travel Time - Uphill Empty								
Total Resistance (%) (rolling + grade)	Time (min)					k	p	
	0.5	1	2	3	4			
0	700	2,570	5,820			2413.6	1.3214	
4	630	2,230	5,400			2170.4	1.3372	
6	590	1,840	4,230	6,630		1804.5	1.2048	
8	560	1,510	3,400	5,250	7,120	1541.5	1.1112	
10	500	1,250	2,790	4,300	5,800	1308.2	1.074	
15	390	900	1,900	2,920	3,930	4,930	951.69	1.0146

$$\text{Travel Time (min)} = \sqrt[p]{\frac{\text{distance}}{k}}$$

Source: Caterpillar Performance Handbook Edition 35



Closure Cost Estimate
Productivity

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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Wheel Loaders

Time (min)

Wheel Loader Specifications														
Description	924G	928G	950G	966G	972G	972G (2)	980G	988G	988G(2)	990	992G	992G(2)	994D	L2350
Payload Capacity (cy)														
Struck	2.2	2.5	3.46	4.46	4.71	4.71	6.34	6.9	6.9	9.5	13.2	13.2	18	
Heaped	2.7	3.25	4	5.25	5.5	5.5	7.25	8.33	8.33	11.25	16	16	22.5	
Average	2.45	2.875	3.73	4.855	5.105	5.105	6.795	7.615	7.615	10.375	14.6	14.6	20.25	53
Matched Truck	N/A	N/A	N/A	725	730	735	N/A	740	769D	773D	777D	785C	793C	797B
Average Cycle Time (min)	0.45	0.45	0.5	0.5	0.5	0.5	0.55	0.55	0.55	0.55	0.6	0.6	0.6	0.75
Passes to Fill Truck	N/A	N/A	N/A	3	4	5	N/A	4	3	4	5	6	7	5
Altitude Deration Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Operator Efficiency	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Job Efficiency	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Time to Fill Truck	N/A	N/A	N/A	1.5	2	2.5	N/A	2.2	1.65	2.2	3	3.6	4.2	3.75
Rolling Resistance**	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

Loader matched to small truck fleet
Loader matched to medium truck fleet
Loader matched to large truck fleet
Loader matched to extra large truck fleet

**A firm, smooth, rolling roadway with dirt or light surfacing, flexing slightly under load or undulating, maintained fairly regularly, watered
992G (2) - can be used to load 785 with 6 passes

Source: Caterpillar Performance Handbook Edition 35; LeTourneau/actual Chilean mine operating data for L2350.

Wheeled Loaders	General Purpose	Spade Nose-Rock
928G	3.25 cubic yard	not available
966G	5.0 cubic yard	not available
972G	5.5 cubic yard	not available
988G	not available	8.3 cubic yard
992G	not available	16.0 cubic yard

note: capacities are 2:1 heaped, SAE standards
NOTES: Buckets for both Track Excavators and Wheel Loaders are offered by CECO & available for the rental rates quoted. Bucket sizes and capacities obtained from CATERPILLAR PERFORMANCE HANDBOOK, ED 34; Section 12, Wheel Loader and Section 4, Excavators

Bucket capacity and width dictated by material weight and configuration, ie., shot, loose, tight bank, stockpile, rock, etc. Typical Nevada applications were used to determine above bucket capacities as related to materials & densities. Job site specifics may alter specific bucket requirements. (Cashman Equipment, Elko, Nevada - February 21, 2005)

Closure Cost Estimate Productivity

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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Shovels

Shovel Specifications (Komatsu equivalent)					
Description	PC2000	PC3000	PC4000	PC5500	PC8000
Payload Capacity (cy)					
Struck	10.46	18.84	26.16	33.48	47.09
Heaped	14.39	25.9	35.97	46.04	64.75
Average	12.43	22.37	31.07	39.76	55.92
Matched Truck	740	777D	785C	793C	797B
Average Cycle Time (min)	0.49	0.49	0.59	0.59	0.69
Passes to Fill Truck	2.05	2.84	3.38	4.69	5.11
Altitude Deration Factor	1	1	0.9	1	1
Operator Efficiency	1	1	1	1	1
Job Efficiency	0.83	0.83	0.83	0.83	0.83
Time to Fill Truck	1.68	2.33	3.32	4.61	5.86
Rolling Resistance**	2.5	2.5	2.5	2.5	2.5

Shovel matched to small truck fleet

Shovel matched to medium truck fleet

Shovel matched to large truck fleet

Shovel matched to extra large truck fleet

**A firm, smooth, rolling roadway with dirt or light surfacing, flexing slightly under load or undulating, maintained fairly regularly, watered
992G (2) - can be used to load 785 with 6 passes
Source: Caterpillar Performance Handbook Edition 35; Komatsu actual Peruvian mine (Lagunas Norte) operating data for PC4000.

Productivity - Motor Graders

Motor Grader Specifications				
Description	120H	14G/H	16G/H	24M
Grader Width (ft)	8	9.25	10.08	14.04
Blade Width (ft)	12	14	16	16
Ripper Width (7 shanks) (ft)	7.6	8.5	9.75	12.83
Road Maintenance Speed (mph)				
Minimum	3	3	3	3
Maximum	9.5	9.5	9.5	9.5
Average	6.25	6.25	6.25	6.25
Hourly Production	33,000	33,000	33,000	33,000
Ripping Speed (mph)				
Minimum	1	1	1	1
Maximum	0	0	0	0
Average	3	3	3	3
Altitude Deration Factor	1.5	1.5	1.5	1.5
Hourly Production (with job efficiency correction & altitude deration factors) (excluding maneuver time)	6,574	6,574	6,574	6,574
Maneuver time per pass (min)	0.5	0.5	0.5	0.5
Operator Efficiency	1	1	1	1
Job Efficiency	0.83	0.83	0.83	0.83

Source: Caterpillar Performance Handbook Edition 35

Closure Cost Estimate Productivity

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Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Productivity - Excavators

Track Excavator Specifications							
Description	312C	320C	325C	330C	345B	365BL	385BL
Bucket Capacity (cy)	0.68	1.57	2.22	2.22	3	4.6	7.3
Fill Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Average Bucket Load (cy)	0.612	1.413	1.998	1.998	2.7	4.14	6.57
Soil Type	packed earth	hard clay	hard clay	hard clay	hard clay	hard clay	hard clay
Job Condition	med-hard	med-hard	med-hard	med-hard	med-hard	med-hard	med-hard
Cycle Times (minutes) - based on hard clay							
Load Bucket	0.07	0.09	0.09	0.09	0.13	0.1	0.19
Swing Loaded	0.06	0.06	0.06	0.07	0.07	0.09	0.06
Dump Bucket	0.03	0.03	0.04	0.04	0.02	0.04	0.03
Swing Empty	0.05	0.05	0.06	0.07	0.06	0.07	0.07
Total Cycle Time	0.21	0.23	0.25	0.27	0.28	0.3	0.35
Job Efficiency	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Operator Efficiency	1	1	1	1	1	1	1
Altitude Deration Factor	1	1	1	1	1	1	1
Corrected Productivity (LCY/hr)	145	306	398	369	480	687	935
Exploration Road Cycle Time ⁽¹⁾ (min)	N/A	0.38	0.4	N/A	0.42	N/A	N/A
Exploration Road Corr Prod (LCY/hr)	N/A	185	249	N/A	320	N/A	N/A
Track Width (ft)	8.17	9.17	9.83	10.5	11.42	11.5	11.5
Ditch/Trench Excavation							
Bucket Capacity (cy)	0.42	0.58	0.88	0.89	2.09	3.27	2.75
Fill Factor	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Corrected Productivity (LCY/hr)	50	63	88	82	186	271	196

Source: Caterpillar Performance Handbook Edition 35

Track Excavators	Hvy Duty Rock	Extreme Service Exc (e.g. haulroad recontour)	Hvy Duty Trench
312C	30", 0.68 cubic yd	47", 0.94 cubic yd	22", .42 cubic yd
320C	30", 0.90 cubic yd	55.1", 1.57 cubic yd	23.6", .58 cubic yd
325C	36", 1.25 cubic yd	60", 2.22 cubic yd	30", .88 cubic yd
330C	36", 1.25 cubic yd	60", 2.22 cubic yd	30", .89 cubic yd
345B	43.2", 1.69 cubic yd	65", 3.0 cubic yd	48", 2.09 cubic yd
365BL	60", 3.25 cubic yd	82", 4.6 cubic yd	59", 3.27 cubic yd
385BL	85", 6.30 cubic yd.	96.0, 7.30 cubic yd	57", 2.75 cubic yd

Note: capacities are 2:1 heaped, SAE standards
NOTES: Buckets for both Track Excavators and Wheel Loaders are offered by CECO & available for the rental rates quoted. Bucket sizes and capacities obtained from CATERPILLAR PERFORMANCE HANDBOOK, ED 34; Section 12, Wheel Loader and Section 4, Excavators
Bucket capacity and width dictated by material weight and configuration, ie., shot, loose, tight bank, stockpile, rock, etc. Typical Nevada applications were used to determine above bucket capacities as related to materials & densities. Job site specifics may alter specific bucket requirements (Cashman Equipment, Elko, Nevada - February 21, 2005)

(1) Exploration cycle time assumes feathering/smoothing performed by excavator

Concrete Breaking Production

Track Excavator w/Hammer Specifications			
Description	325C	345B	385BL
Hydraulic Hammer	H120D s	H160D s	H180D s
Material	reinforced concrete		
Min Shift Production (yd3/8hr)	160	300	350
Max Shift Production (yd3/8hr)	300	850	1,550
Avg Shift Production (8hr)	230	575	950
Job Efficiency	0.83	0.83	0.83
Altitude Deration Factor	1	1	1

Source: Caterpillar Performance Handbook Edition 35

Closure Cost Estimate Productivity

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Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Drill Hole Plugging Productivity

Drill Hole Plugging Productivity		
Description	Drill Rig	Pump Rig
Move-to-hole, set-up, tear-down ⁽¹⁾	2	2
Trip in tremmie pipe ⁽¹⁾	500	
Pulling casing (threaded, not cemented)	200	
Single-pass perforating (water wells)	activity(all passes) ⁽²⁾ (Passes
4	60	4
6	60	4
8	50	4
12	45	6
18	40	9
24	28	12
Perforation setup, trip in/out, tear-down	2	
Perforation tool cost (wear cost) ⁽³⁾	2.5	
Inert Material Placement (backfill)		
Grouting/Cement ⁽⁴⁾ (cy/hr)		5.33
Cuttings (see below) (cy/hr)		3.5
1. Drillers daily logs from Newmont, Barrick, New West Gold, Agnico Eagle, Idaho General Mines Inc. 2. Drillers daily logs from Newmont, Barrick, Target Minerals 3. Drillers daily logs from Newmont 4. WDC Exploration, Dec 2005 Source: WDC Exploration, Dec 2005		
Cuttings Placement Productivity		
Shift productivity (Means 02210-700-0120; Crew B11M)	28	cy / shift
Shift length	8	hours
Estimated Hourly Productivity	3.5	cy / hour

**Closure Cost Estimate
Productivity**

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Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Altitude Deration Table

MODEL	Elevation											
	0-760 m		760-1500 m		1500-2300 m		2300-3000 m		3000-3800 m		3800-4600 m	
	(0-2500')		(2500-5000')		(5000-7000')		(7500-10,000')		(10,000-12,000')		(12,500-15,000')	
	CAT	User	CAT	User	CAT	User	CAT	User	CAT	User	CAT	User
Bulldozers												
D6R	100		100		100		100		92		84	
D6R w/ Winch	100		100		100		100		92		84	
D7R	100		100		100		100		100		96	
D8R	100		100		100		93		85		77	
D9R	100		100		100		93		85		77	
D10R	100		100		100		100		97		89	
D11R	100		100		100		93		85		77	
Wheeled Dozers												
824G	100		100		100		100		92		84	
834G	100		100		100		100		92		84	
844	100		100		100		100		100		96	
854G	100		100		100		93		85		77	
Graders												
120H	100		100		100		100		96		93	
14G/H	100		100		100		100		98		96	
16G/H	100		100		100		100		98		96	
24M	100		100		100		100		98		96	
Excavators												
312C	100		100		100		83		78		73	
320C	100		100		90		87		83		76	
325C	100		100		100		100		100		100	
330C	100		100		100		100		100		100	
345B	100		100		100		100		93		93	
365BL	100		100		100		86		86		86	
385BL	100		100		100		93		85		78	
Scrapers												
631G	100		100		100		100		97		90	
637G	100		100		100		95		87		80	
Loaders												
924G	100		100		100		100		97		89	
928G	100		100		100		100		92		85	
950G	100		100		100		100		100		100	
966G	100		100		100		100		96		88	
972G	100		100		92		84		77		70	
980G	100		100		100		100		96		88	
988G	100		100		100		95		85		75	
990	100		100		100		100		92		85	
992G	100		100		100		100		93		87	
994D	100		100		100		100		96		88	
L2350	100		100		100		100		96		90	
Shovels												
PC2000	100		100		100		100		96		90	
PC3000	100		100		100		100		96		90	
PC4000	100		100		100		100		96		90	
PC5500	100		100		100		100		96		90	
PC8000	100		100		100		100		96		90	

**Closure Cost Estimate
Productivity**

Project Name: Rosemont Copper World Mined Land Reclamation Plan - Reclamation Plan
 Date of Submittal: May 3, 2022
 File Name: Rosemont_RP21_MLRP_SRCE_Version_1_4_1_017_NVb_050322.xlsm
 Model Version: Version 1.4.1
 Cost Data: User Data
 Cost Data File: SRCE_Cost_data-USR_1_12.xlsm
 Cost Estimate Type: Surety Cost Basis: Southern Nevada - Adjusted for Arizona

Dozer Operator Skill:	Average
Grader Operator Skill:	Average
Truck/Scraper Operator:	Average
Loader Operator Skill:	Average
Excavator Operator Skill:	Average
Dozer Job Efficiency:	50 min/hr
Truck Job Efficiency:	50 min/hr
Scraper Job Efficiency:	50 min/hr
Loader Job Efficiency:	50 min/hr
Excavator Job Efficiency:	50 min/hr
Grader Job Efficiency:	50 min/hr

Other Equipment											
420D 4WD Backhoe	99		97		95		91		91		91
428D 4WD Backhoe	99		97		95		91		91		91
CS533E Vibratory Roller	100		100		98		95		91		86
CS633E Vibratory Roller	100		100		100		100		91		86
CP533E Sheepsfoot Compactor	100		100		98		95		91		100
CP633E Sheepsfoot Compactor	100		100		100		100		91		86
Light Truck - 1.5 Ton											
Supervisor's Truck											
Flatbed Truck											
Air Compressor + tools											
Welding Equipment											
Heavy Duty Drill Rig											
Pump (plugging) Drill Rig											
Concrete Pump											
Gas Engine Vibrator											
Generator 5KW											
HDEP Welder (pipe or liner)											
5 Ton Crane											
20 Ton Crane											
50 Ton Crane											
120 Ton Crane											
Trucks											
725	100		100		100		100		100		95
730	100		100		100		100		100		95
735	100		100		100		100		99		91
740	100		100		100		100		99		91
769D	100		100		100		93		88		82
773E	100		100		100		100		93		85
777D	100		100		100		100		93		87
785C	100		100		100		93		86		80
793C	100		100		100		100		100		93
797B	100		100		100		100		100		93
613E (5,000 gal) Water Wagon	100		100		100		100		95		87
621E (8,000 gal) Water Wagon	100		100		100		100		97		90
777D Water Truck	100		100		100		100		93		87
785C Water Truck	100		100		100		93		86		80
Dump Truck (10-12 yd ³) (5)											
Notes: User entered deration value will override values from CAT Performance Handbook, except L2350 Loader: data from actual mine performance in Chile. Komatsu altitude deration assumed from LeTourneau L2350											